

TECHNICAL REFERENCE MANUAL

3D Drawings
Unit Specifications
Cross Sections
Design Charts
Details

STEEL GRID

EXCAVATION CUT LINE

PERFORATED DRAIN PIPE

PLAN VIEW



Our MagnumStone[™] product is a large block, hollow core, wet-cast segmental retaining wall system that uses nearly half the amount of concrete per face foot when compared to traditional solid systems. The environmental and economical advantages of the pre-cast hollow block MagnumStone[™] product are unprecedented in the retaining wall industry. Because of its size and design flexibility, MagnumStone[™] is ideal for almost any retaining wall project from residential to large commercial installations.

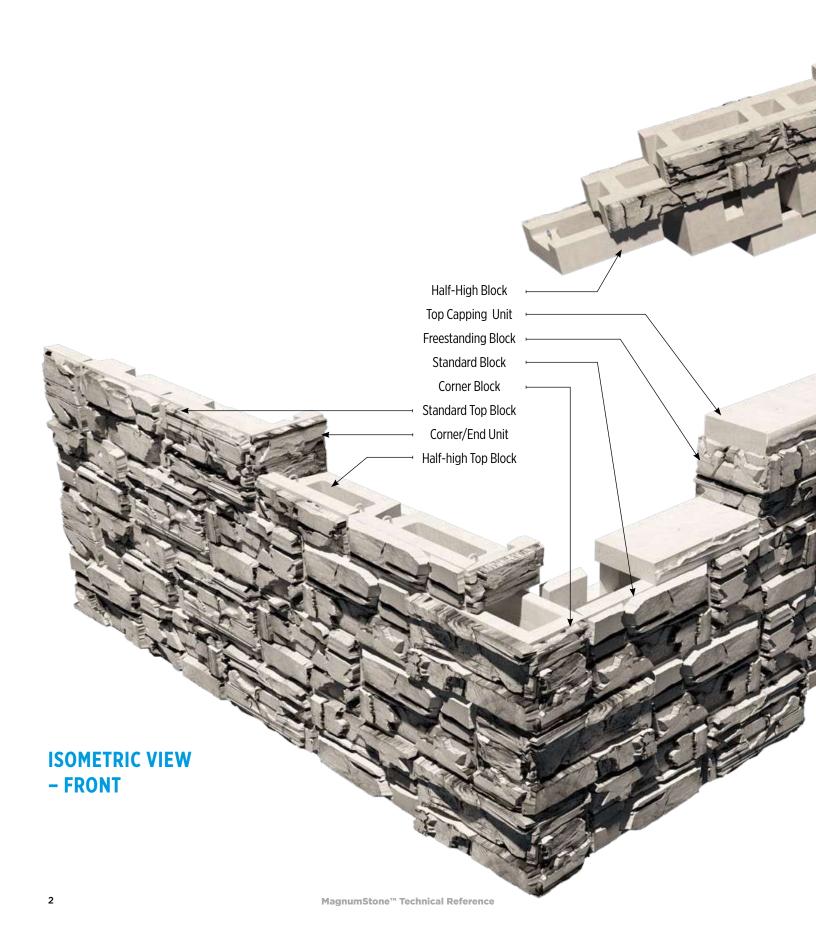
Unit to unit connection uses our patented, mortarless, SecureLug™ interlock system (no expensive, time consuming pins or clips.) and are light enough that they can be moved two at a time with lighter machinery such as a standard Bobcat.

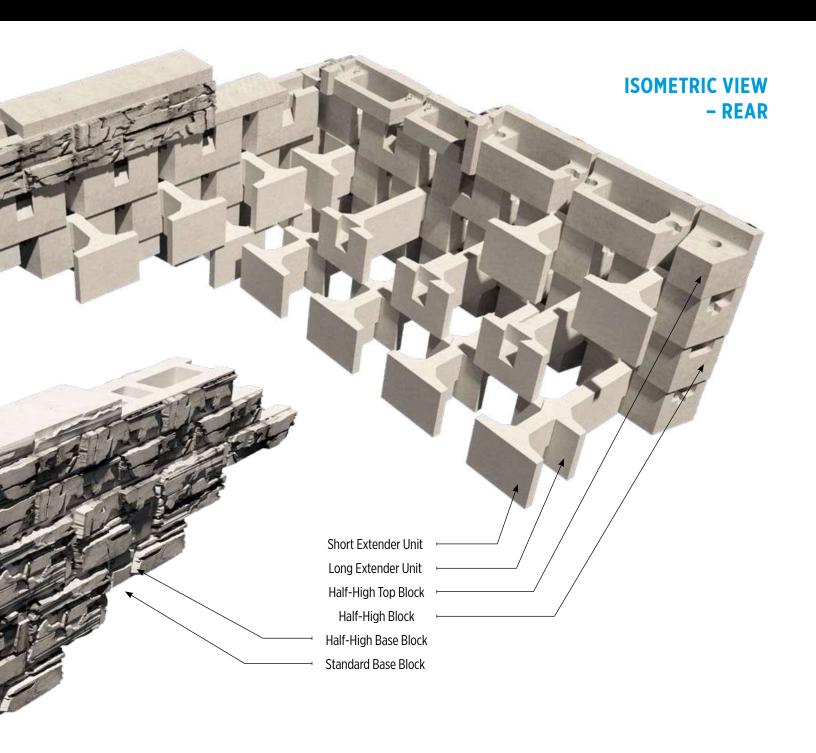
A wet cast segmental retaining wall product provides freeze/thaw durability advantages over competing products, a critical factor for the Departments Of Transport work that MagnumStone™ is very well suited for. The wet-cast process also allows for unique throughwall applications, face options and logo details for any type of project.

TECHNICAL REFERENCE INDEX

MagnumStone System	2
MagnumStone Blocks	4
Standard Block	6
Standard Base Block	7
Standard Top Block	8
Half-High Block	9
Half-High Base Block	10
Half-High Top Block	11
Half-Wide Block	12
Half-Wide Base Block	
Half-Wide Top Block	14
Corner Block	
Base Corner Block	
Top Corner Block	17
Freestanding Blocks	
Corner/End Units	20
Step/Top Cap Unit	22
Extender Units	23
Gravity Wall Cross Section & Details	24
Gravity Wall Charts	25
Plantable Wall Cross Section & Details	28
25° Setback Plantable Wall Charts	29
18° Setback Plantable Wall Charts	30
39° Setback Plantable Wall Charts	
Geogrid Wall Cross Section & Detail	
Postive Connection Wall Cross Section & Detail	
Cantilevered Wall	
Soil Nailing	
Water Application/Drainage	
Fence / Post Options	37
Freestanding Parapet Wall	
Top of Wall Barrier Options	39

THE MAGNUMSTONE™ SYSTEM





MAGNUMSTONE™ BLOCKS



STANDARD 1370 lbs (621 kgs)



STANDARD BASE 1345 lbs (610 kgs)



STANDARD TOP 1220 lbs (553 kgs)



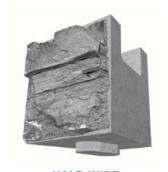
HALF-HIGH 750 lbs (340 kgs)



HALF-HIGH BASE 725 lbs (328 kgs)



HALF-HIGH TOP 680 lbs (308 kgs)



HALF-WIDE 835 lbs (378 kg)



HALF-WIDE BASE 823 lbs (373 kgs)



HALF-WIDE TOP 760 lbs (345 kgs)



CORNERBLOCK STANDARD 1700 lbs (771 kgs)



CORNERBLOCK BASE 1675 lbs (760 kgs)



CORNERBLOCK TOP 1500 lbs (680 kgs)



2 SIDED FREESTANDING 900 lbs (408 kgs)



3 SIDED FREESTANDING 900 lbs (408 kgs)



STEP/CAP 290 lbs (131 kgs)



CORNER/END 340 lbs (154 kgs)



HALF-HIGH CORNER/END 170 lbs (77 kgs)

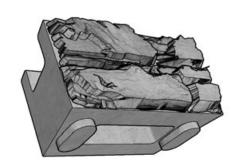


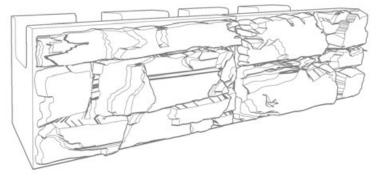
4FT EXTENDER 820 lbs (372 kgs)



2FT EXTENDER 520 lbs (236 kgs)

MAGNUMSTONE™ STANDARD BLOCK





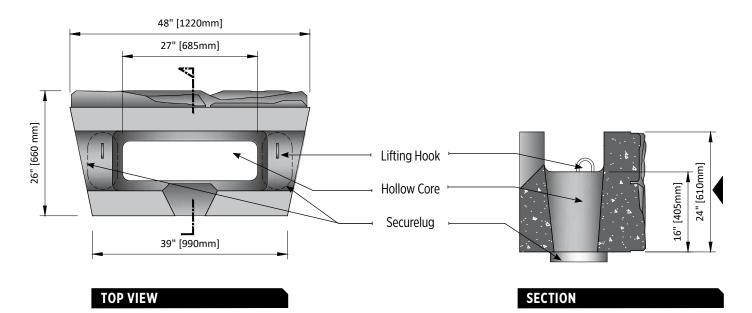
PERSPECTIVE



STANDARD

1370 lbs (621 kgs)

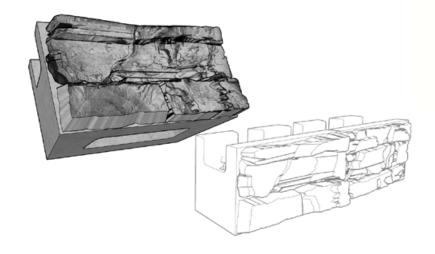
Height	24"	610mm
Depth	26"	660mm
Face Width	48"	1220mm
Back Width	39"	990mm
Face Area	8 sq ft	0.745 m2
Setback	2.4°	



48" [1220mm]

 $Weights \ and \ dimensions \ are \ nominal. \ Specifications \ may \ change. \ Verify \ exact \ information \ with \ your \ local \ producer.$

MAGNUMSTONE™ STANDARD BASE BLOCK

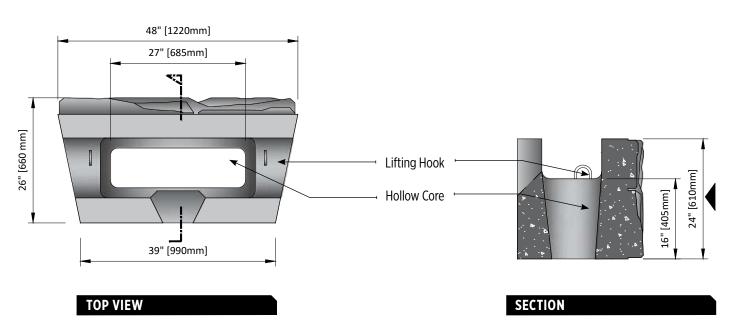


STANDARD BASE

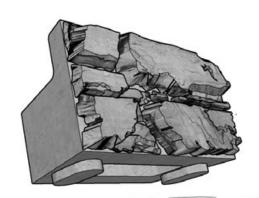
1345 lbs (610 kgs)

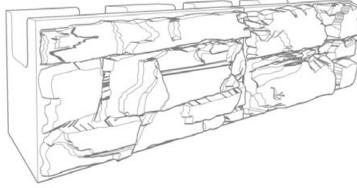
Height	24"	610mm
Depth	26"	660mm
Face Width	48"	1220mm
Back Width	39"	990mm
Face Area	8 sq ft	0.745 m2
Setback	2.4°	

PERSPECTIVE



MAGNUMSTONE™ STANDARD TOP BLOCK





4498" [[11222200mmm]]

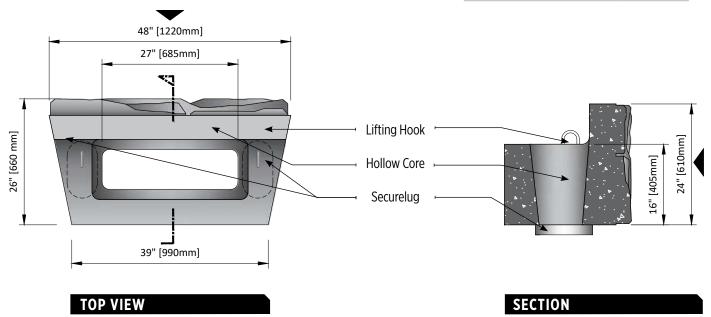
PERSPECTIVE



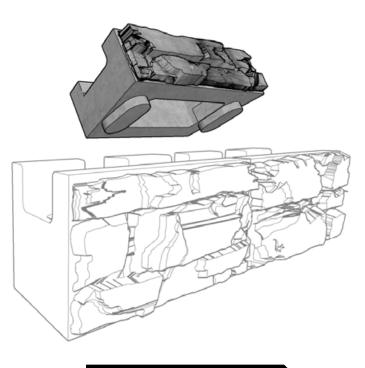
STANDARD TOP

1220 lbs (553 kgs)

24"	610mm
26"	660mm
48"	1220mm
39"	990mm
8 sq ft	0.745 m2
2.4°	
	26" 48" 39" 8 sq ft



MAGNUMSTONE™ HALF-HIGH BLOCK





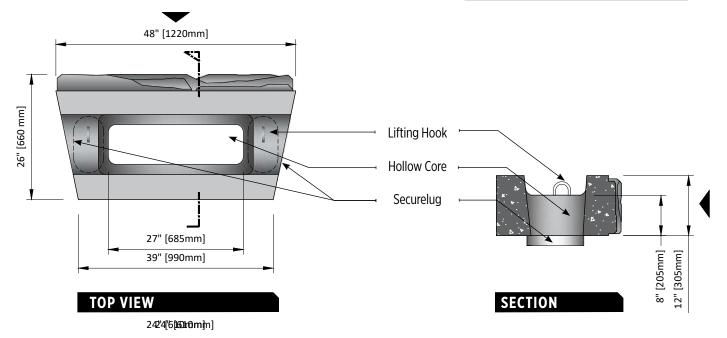
HALF-HIGH

750 lbs (340 kgs)

Height	12"	305mm
Depth	26"	660mm EE
Face Width	48"	100 Mm 100 124 61 61 61
Back Width	39"	9901
Face Area	4 sq ft	0.37 m2
Setback	2.4°	

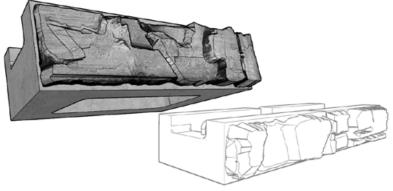
PERSPECTIVE

393'9[9**99990m]**m]



MAGNUMSTONE™ HALF-HIGH BASE BLOCK



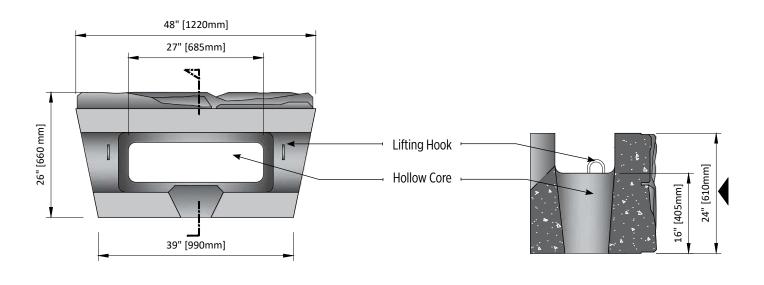


HALF-HIGH BASE

725 lbs (328 kgs)

Height	24"	610mm
Depth	24"	610mm
Face Width	48"	1220mm
Back Width	39"	990mm
Face Area	4 sq ft	0.37 m2
Setback	2.4°	

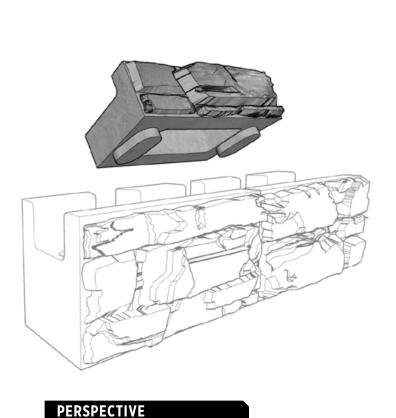
PERSPECTIVE



TOP VIEW

SECTION

MAGNUMSTONE™ HALF-HIGH TOP BLOCK



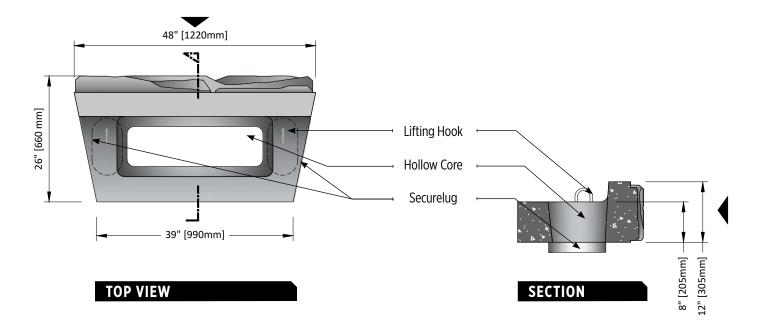
39" [990mm]



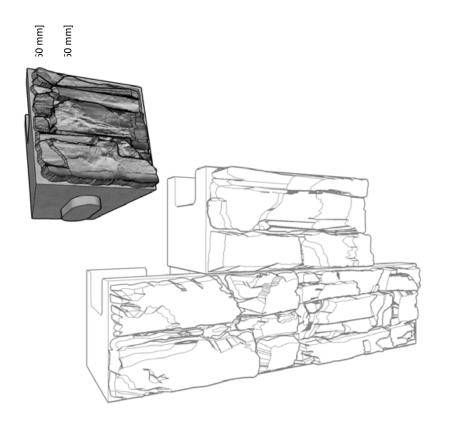
HALF-HIGH TOP

680 lbs (308 kgs)

Height	12"	305mm
Depth	24"	610mm
Face Width	48"	1220mm
Back Width	39"	1220mm 9990mm 9900mm [010mm]
Face Area	4 sq ft	16±25°0 24" 2405
Setback	2.4°	



MAGNUMSTONE™ HALF-WIDE BLOCK



PERSPECTIVE

39" [990mm]

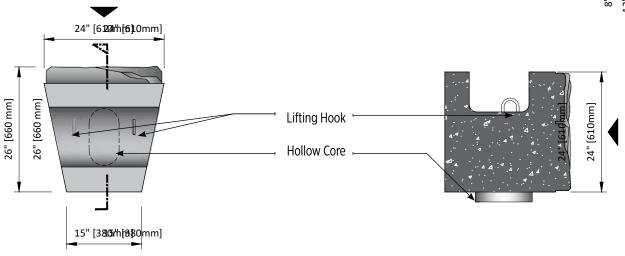


HALF-WIDE

835 lbs (378 kgs)

Height	24"	610mm	
Depth	26"	660mm	
Face Width	24"	610mm	
Back Width	15"	380mm	
Face Area	4 sq ft	0.37 m2	
Setback	2.4°		[205mm]
			=

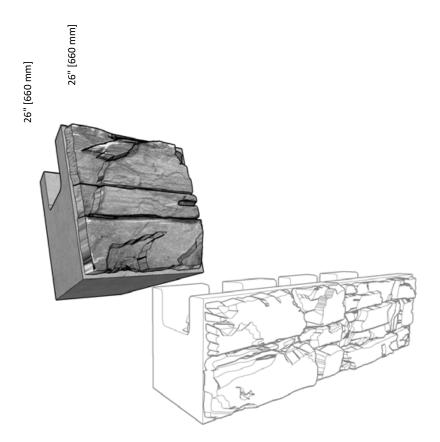
8"[205mm] 12" [305mm]



TOP VIEW

SECTION

MAGNUMSTONE™ HALF-WIDE BASE BLOCK



PERSPECTIVE

TOP VIEW

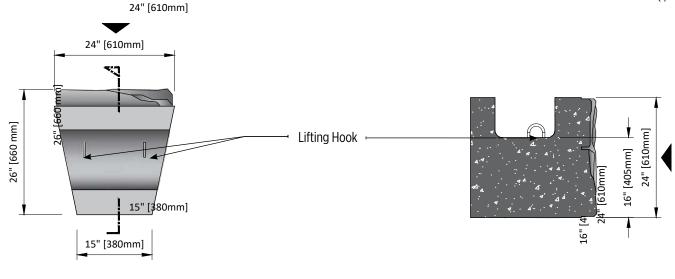
HALF-WIDE BASE

823 lbs (373 kgs)

Height	24"	610mm	
Depth	26"	660mm	
Face Width	24"	610mm	
Back Width	15"	380mm	
Face Area	4 sq ft	0.37 m2	[205mm]
Setback	2.4°		3" [205

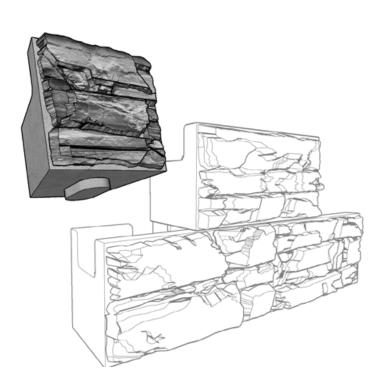
SECTION

12" [305mm]



MAGNUMSTONE™ HALF-WIDE TOP BLOCK

26" [660 mm]



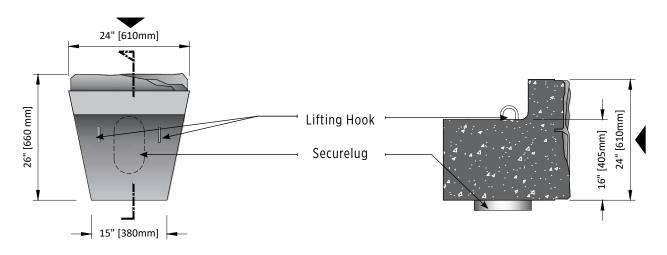
PERSPECTIVE



HALF-WIDE TOP

760 lbs (345 kgs)

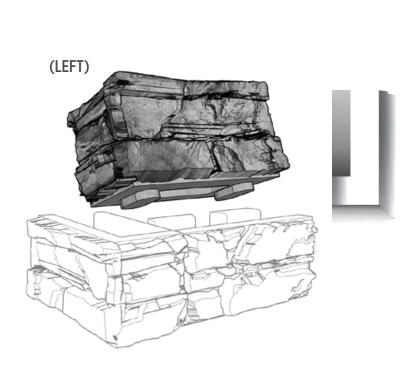
Height	24"	610mm
Depth	26"	660mm
Face Width	24"	610mm
Back Width	15"	[205mm] [305mm]
Face Area	4 sq ft	0.37 m2∞ ¹ 7
Setback	2.4°	



TOP VIEW

SECTION

MAGNUMSTONE™ CORNER BLOCK



PERSPECTIVE

CORNER BLOCK

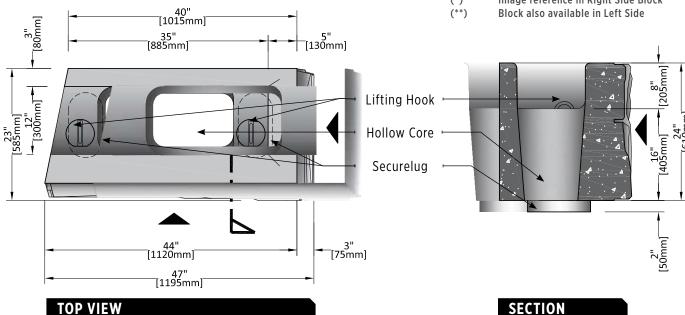
(RIGHT)

1700 lbs (771 kgs)

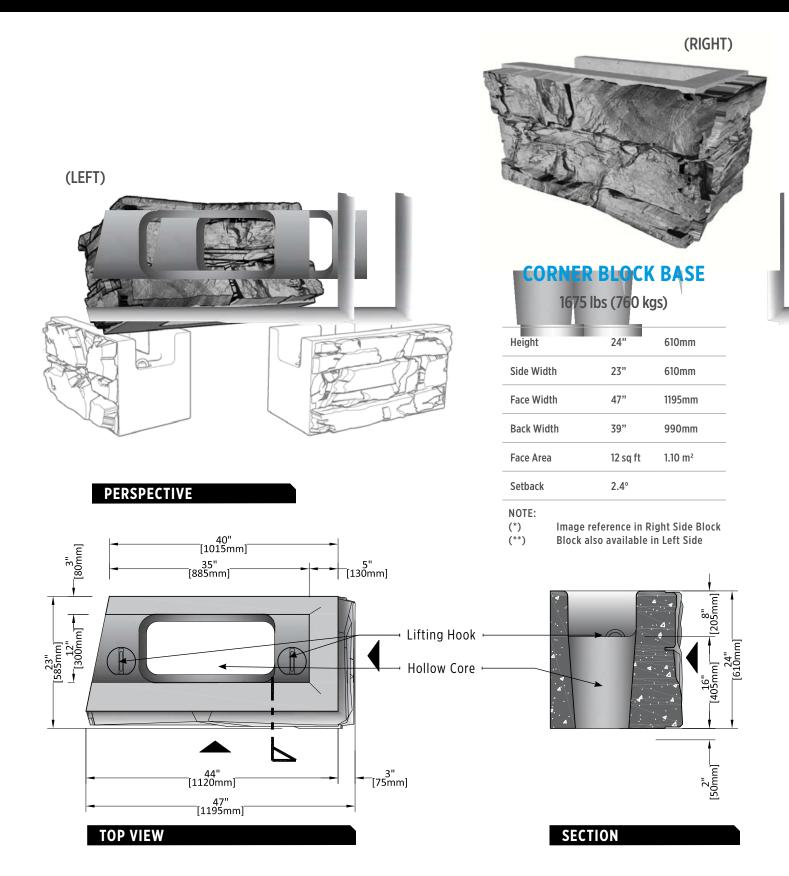
Height	24"	610mm
Side Width	23"	610mm
Face Width	47"	1195mm
Back Width	39"	990mm
Face Area	12 sq ft	1.10 m ²
Setback	2.4°	

NOTE:

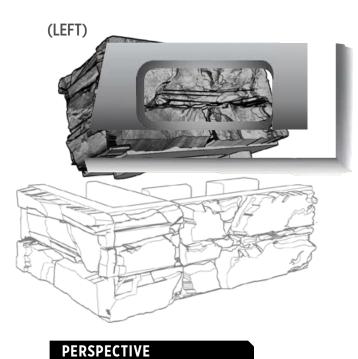
(*) (**) Image reference in Right Side Block



MAGNUMSTONE™ BASE CORNER BLOCK



MAGNUMSTONE™ TOP CORNER BLOCK



(RIGHT)

CORNER BLOCK TOP

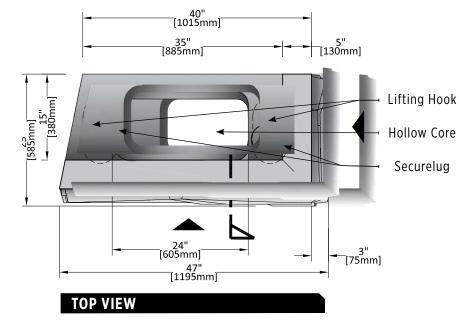
1500 lbs (680 kgs)

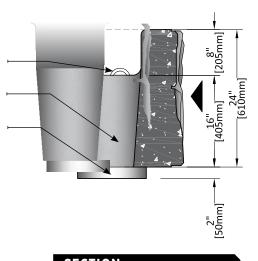
Height	24"	610mm
Side Width	23"	610mm
Face Width	47"	1195mm
Back Width	39"	990mm
Face Area	12 sq ft	1.10 m²
Setback	2.4°	

NOTE:

(*) (**) Image reference in Right Side Block

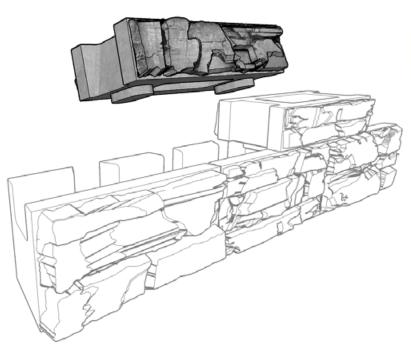
Block also available in Left Side





SECTION

MAGNUMSTONE™ FREESTANDING BLOCKS

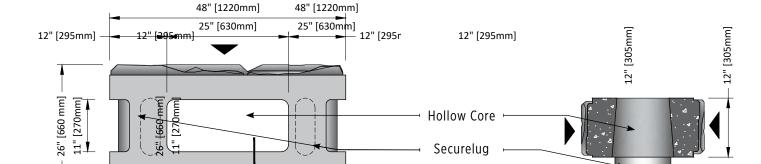




2-SIDED

900 lbs (408 kgs)

Height	12"	305mm
Depth	26"	660mm
Face Width	48"	1220mm
Back Width	48"	1220mm
Face Area	4 sq ft	0.37 m2
Setback	0°	



TOP VIEW

PERSPECTIVE

SECTION

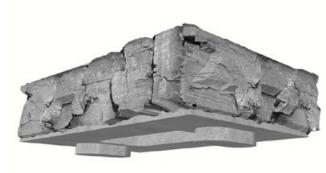
48" [1220mm] 25" [630mm]

48" [1220mm] 12" [295mm] 25" [630mm]

12" [295mm]

12" [295mm]

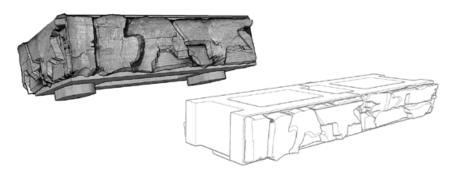




3-SIDED

900 lbs (408 kgs)

Height	12"	305mm	
Depth	26"	660mm	
Face Width	48"	1220mm	
Back Width	48"	1220mm	12" [3
Face Area	4 sq ft	0.37 m2	
Setback	0°		



PERSPECTIVE

48" [1220mm] 48" [1220mm] 25" [630mm] 12" [295mm] < 12" [295mm] 25" [630mm] 12" [295mm] 12" [295mm 2" [305mm] 11" [270mm] 26" [660 mm] Hollow Core Securelug

TOP VIEW

SECTION

Weights and dimensions are nominal. Specifications may change. Verify exact information with your local producer.

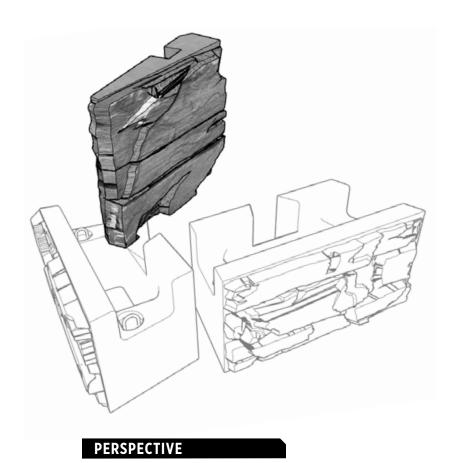
Specifications may change. Verify exact information with your local producer.

Specifications may change. Verify exact information with your local producer.

Specifications may change. Verify exact information with your local producer.

Specifications may change. Verify exact information with your local producer.

MAGNUMSTONE™ CORNER/END UNITS

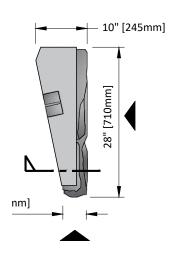


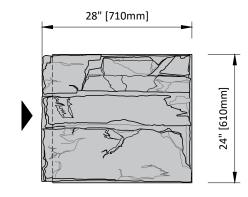


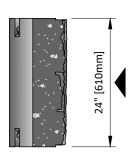
STANDARD CORNER/END UNIT

340 lbs (154 kgs)

Height	24"	610mm
Depth	24"	610mm
Face Width	28"	710mm
Narrow Width	4"	110mm
Face Area	4.6 sqft	0.44 m2
Setback	2.4°	





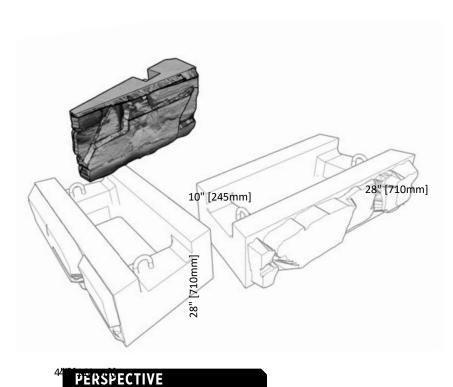


TOP VIEW

FRONT VIEW

SECTION

10" [245**ir0**lh[**]145**r[**2**74\$mm]

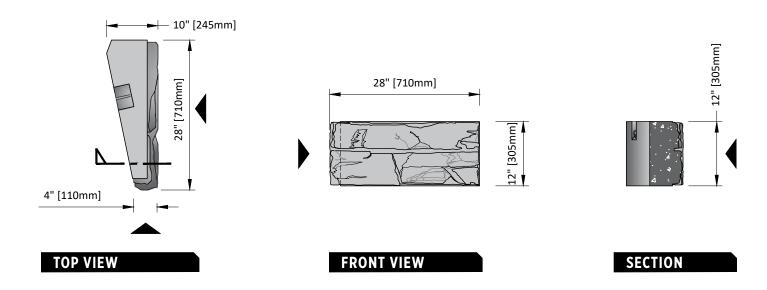




HALF-HIGH CORNER/END UNIT

170 lbs (77 kgs)

Height	12"	305mm
Dep th.	24"	610mm
Fac //idth	28"	710mm EE
Nar Www. Width	4"	110mm 27
Face Area	2.3 sq ft	0.44 m2
Setback	2.4°	



 $Weights \ and \ dimensions \ are \ nominal. \ Specifications \ may \ change. \ Verify \ exact \ information \ with \ your \ local \ producer.$

MAGNUMSTONE™ BASE CORNER BLOCK





STEP/TOP CAPPING UNIT

290 lbs (131 kgs)

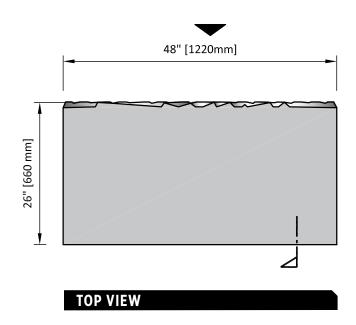
Height	6"	15.25mm
Depth	24"	610mm
Width	48"	1220mm

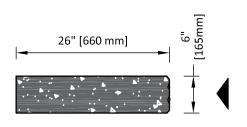
NOTF:

Cap Style may vary by Manufacturer

PERSPECTIVE

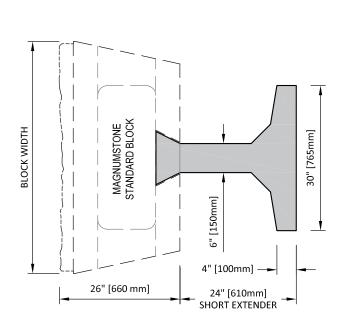
STEP





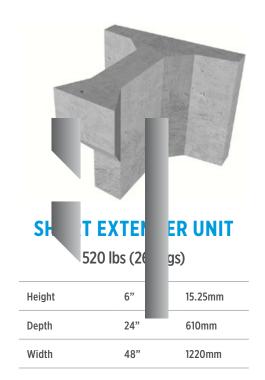
SECTION

MAGNUMSTONE™ TOP CORNER BLOCK

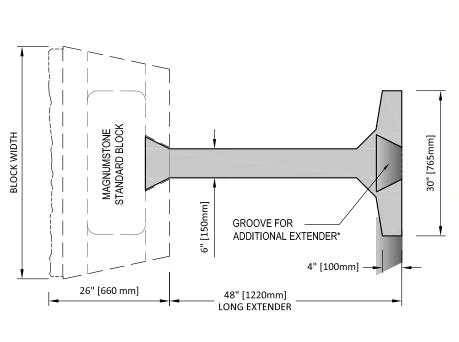


TOP VIEW

TOP VIEW



NOTE: For Gravity and Hybrid Retaining walls



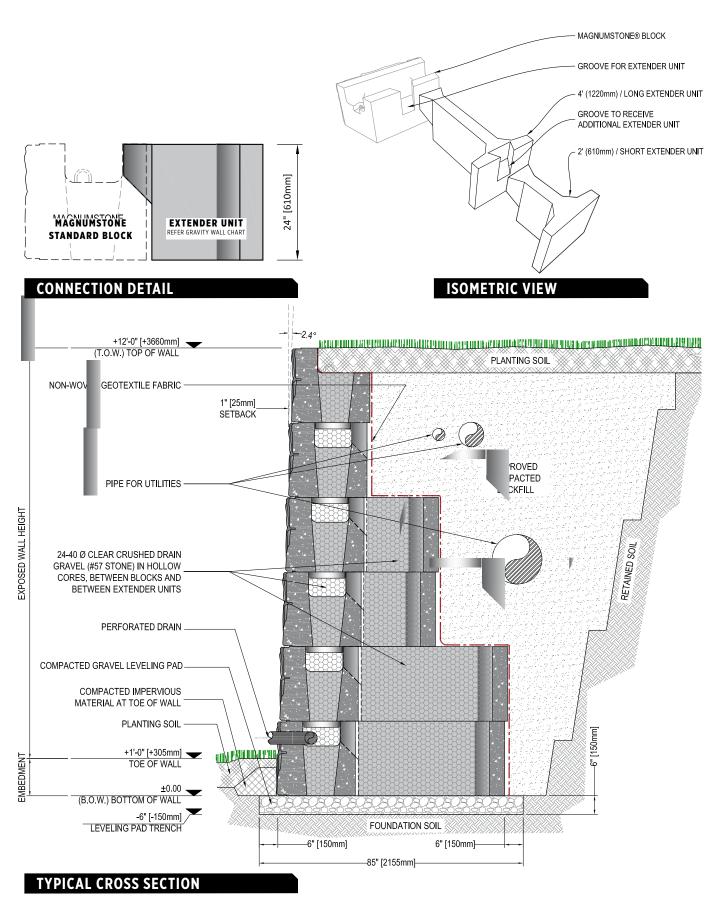


LONG EXTENDER UNIT

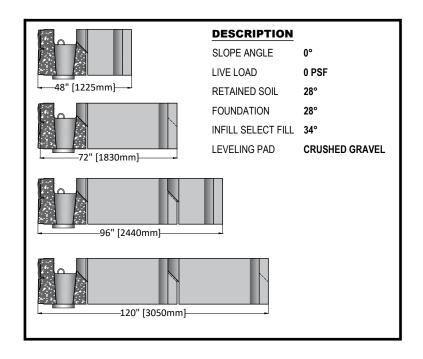
580 lbs (263 kgs)

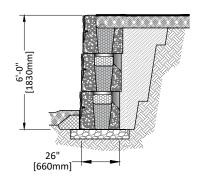
Height	6"	15.25mm
Depth	24"	610mm
Width	407	1220mm

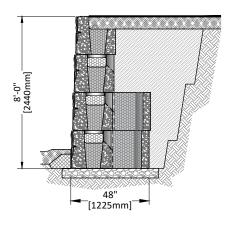
MAGNUMSTONE™ GRAVITY WALL

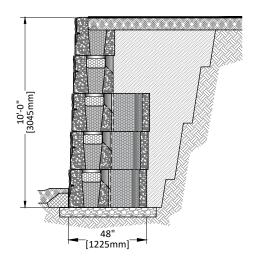


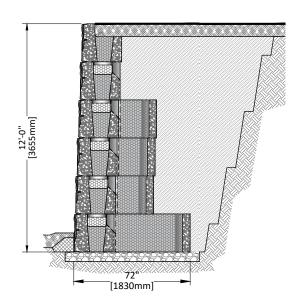
MAGNUMSTONE™ GRAVITY WALL CHARTS

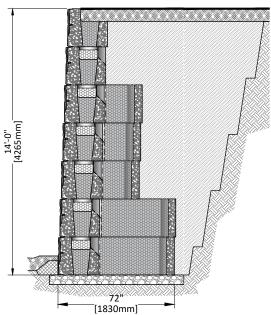








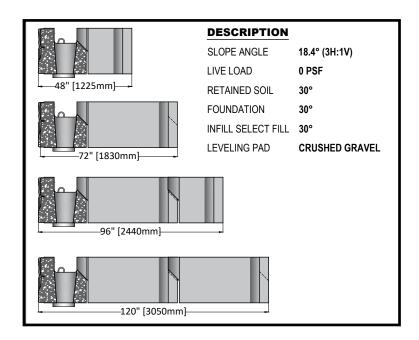


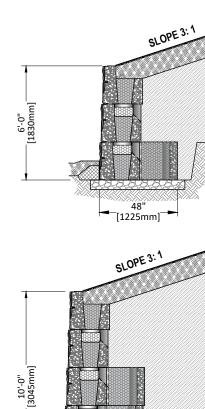


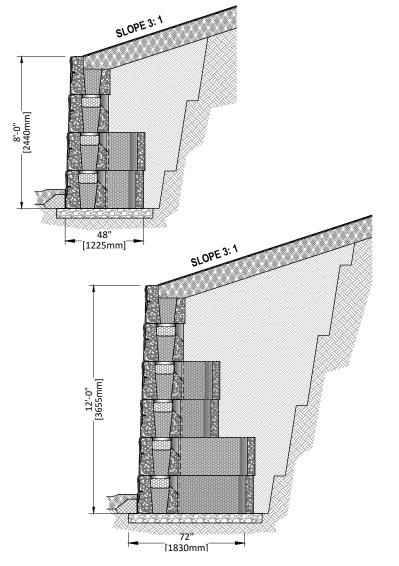
MAGNUMSTONE™ GRAVITY WALL CHARTS

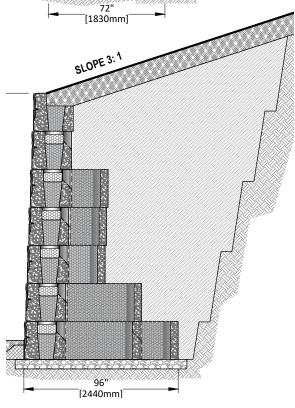


MAGNUMSTONE™ GRAVITY WALL CHARTS

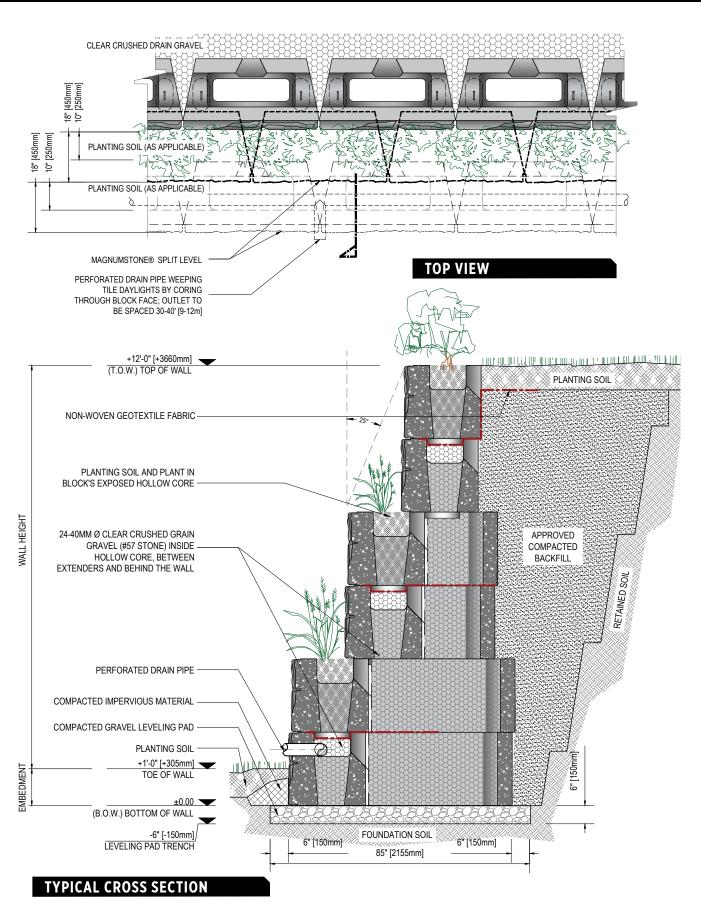




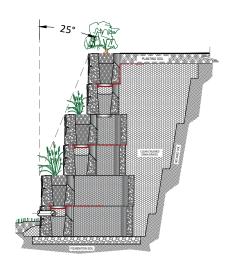




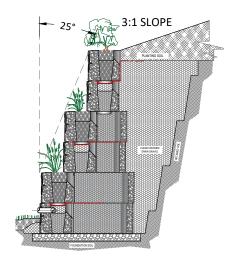
MAGNUMSTONE™ PLANTABLE WALL



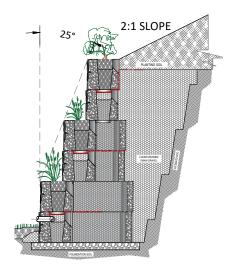
MAGNUMSTONE™ 25° SETBACK PLANTABLE WALL



SOIL TYPE	HEIGHT EXPOSED	HEIGHT EMBEDDED	TOTAL
34° SOIL	14.2' [4328 mm]	0.8' [244 mm]	15' [6706 mm]
30° SOIL	10.4' [3170 mm]	0.6' [183 mm]	11' [6706 mm]
26° SOIL	7.5' [2286 mm]	0.5' [152 mm]	8' [4572 mm]



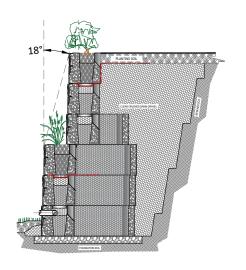
SOIL TYPE	HEIGHT EXPOSED	HEIGHT EMBEDDED	TOTAL
34° SOIL	11.3' [3444 mm]	0.7' [213 mm]	12' [3658 mm]
30° SOIL	7.5' [2286 mm]	0.5' [152 mm]	8' [4572 mm]
26° SOIL	5.5' [1676mm]	0.5' [152 mm]	6' [1829 mm]



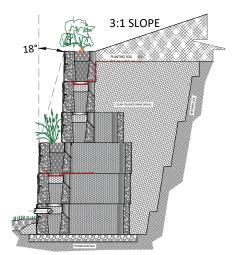
SOIL TYPE	HEIGHT EXPOSED	HEIGHT EMBEDDED	TOTAL
34° SOIL	9.4' [2865 mm]	0.6' [183 mm]	10' [3048 mm]
30° SOIL	5.5' [1676 mm]	0.5' [152 mm]	6' [1829 mm]
26° SOIL	N/A	N/A	N/A

DISCLAIMER: This chart is for initial estimation purposes only. Do not use for final design or construction. Retain a licensed professional engineer to design every wall on a case-by-case basis using site specific criteria. The accuracy and use of this document are the sole responsibility of the user. All calculations were performed based on NCMA methodology using factors of safety of 1.5 for sliding and overturning. The bearing capacity of base soils will be no less than 3,000 pounds per square foot (psf). All soils have been assumed to be less than 125 pounds per cubic foot (pcf). Global Stability Analysis has not been performed.

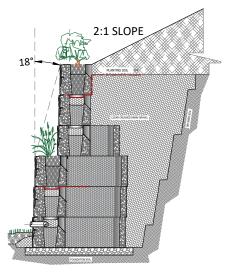
MAGNUMSTONE™ 18° SETBACK PLANTABLE WALL



SOIL TYPE	HEIGHT EXPOSED	HEIGHT EMBEDDED	TOTAL
34° SOIL	10.4' [3170 mm]	0.6' [183 mm]	11' [3353 mm]
30° SOIL	8.5' [2591 mm]	0.5' [152 mm]	9' [2743 mm]
26° SOIL	6.5' [1981 mm]	0.5' [152 mm]	7' [2134 mm]



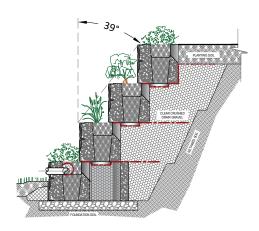
SOIL TYPE	HEIGHT EXPOSED	HEIGHT EMBEDDED	TOTAL
34° SOIL	8.5' [2591 mm]	0.5' [152 mm]	9' [2743 mm]
30° SOIL	N/A	N/A	N/A
26° SOIL	N/A	N/A	N/A



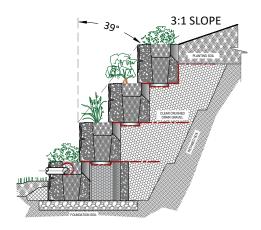
SOIL TYPE	HEIGHT EXPOSED	HEIGHT EMBEDDED	TOTAL
34° SOIL	6.5' [1981 mm]	0.5' [152 mm]	7' [2134 mm]
30° SOIL	N/A	N/A	N/A
26° SOIL	N/A	N/A	N/A

DISCLAIMER: This chart is for initial estimation purposes only. Do not use for final design or construction. Retain a licensed professional engineer to design every wall on a case-by-case basis using site specific criteria. The accuracy and use of this document are the sole responsibility of the user. All calculations were performed based on NCMA methodology using factors of safety of 1.5 for sliding and overturning. The bearing capacity of base soils will be no less than 3,000 pounds per square foot (psf). All soils have been assumed to be less than 125 pounds per cubic foot (pcf). Global Stability Analysis has not been performed.

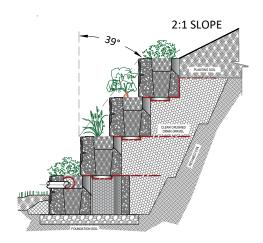
MAGNUMSTONE™ 39° SETBACK PLANTABLE WALL



SOIL TYPE	HEIGHT EXPOSED	HEIGHT EMBEDDED	TOTAL
34° SOIL	20.9' [6370 mm]	1.1' [335 mm]	22.0' [6706 mm]
30° SOIL	20.9' [6370 mm]	1.1' [335 mm]	22.0' [6706 mm]
26° SOIL	14.2' [4420 mm]	0.8' [244 mm]	15.0' [4572 mm]



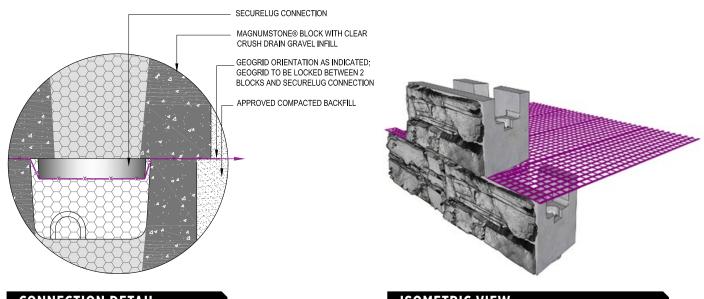
SOIL TYPE	HEIGHT EXPOSED	HEIGHT EMBEDDED	TOTAL
34° SOIL	20.9' [6370 mm]	1.1' [335 mm]	22.0' [6706 mm]
30° SOIL	17.0' [5182 mm]	1.0' [305 mm]	18.0' [5486 mm]
26° SOIL	10.4' [3170 mm]	0.6' [183mm]	11.0' [3353 mm]



SOIL TYPE	HEIGHT EXPOSED	HEIGHT EMBEDDED	TOTAL
34° SOIL	20.9' [6370 mm]	1.1' [335 mm]	22.0' [6706 mm]
30° SOIL	13.2' [4023 mm]	0.8' [244 mm]	14.0' [4267 mm]
26° SOIL	N/A	N/A	N/A

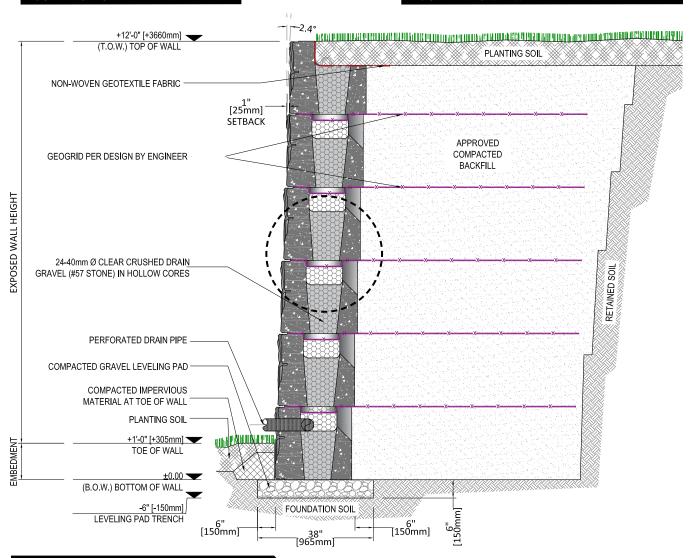
DISCLAIMER: This chart is for initial estimation purposes only. Do not use for final design or construction. Retain a licensed professional engineer to design every wall on a case-by-case basis using site specific criteria. The accuracy and use of this document are the sole responsibility of the user. All calculations were performed based on NCMA methodology using factors of safety of 1.5 for sliding and overturning. The bearing capacity of base soils will be no less than 3,000 pounds per square foot (psf). All soils have been assumed to be less than 125 pounds per cubic foot (pcf). Global Stability Analysis has not been performed.

MAGNUMSTONE™ GEOGRID WALL



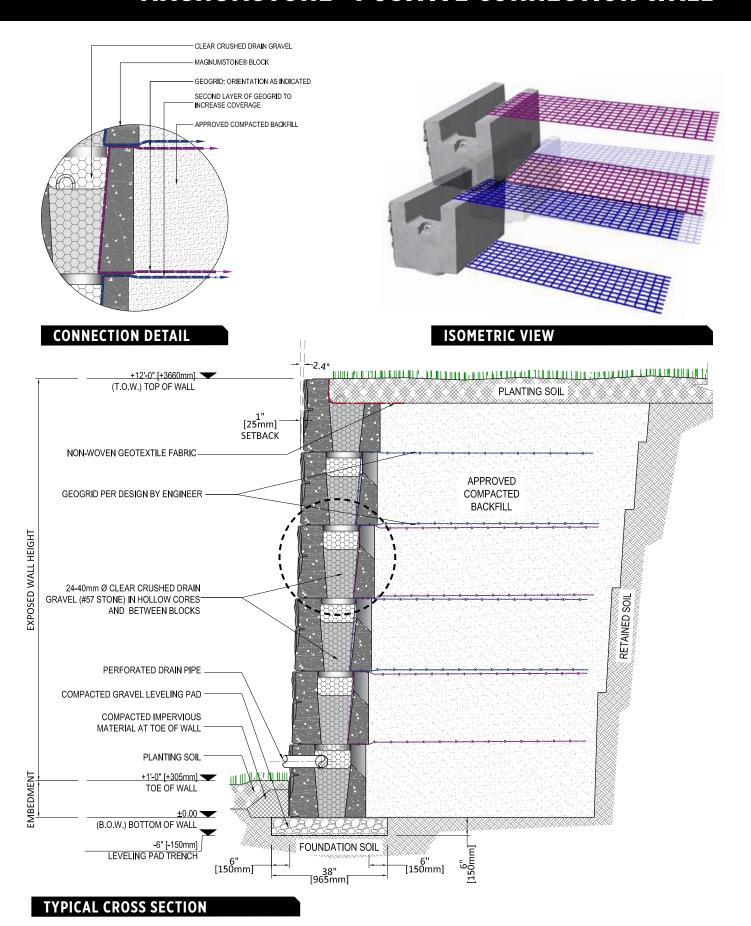
CONNECTION DETAIL

ISOMETRIC VIEW

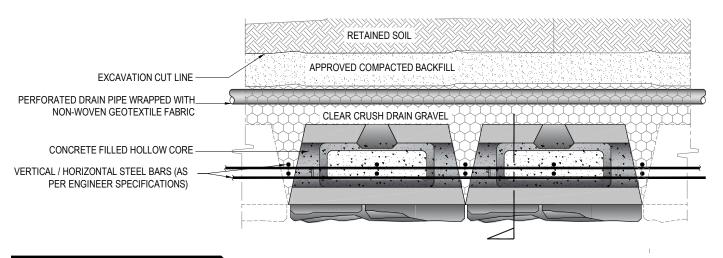


TYPICAL CROSS SECTION

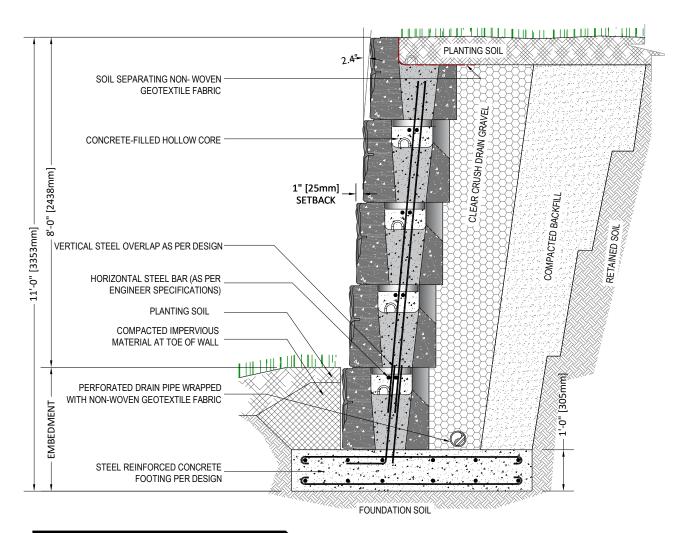
MAGNUMSTONE™ POSITIVE CONNECTION WALL



MAGNUMSTONE™ CANTILEVERED WALL

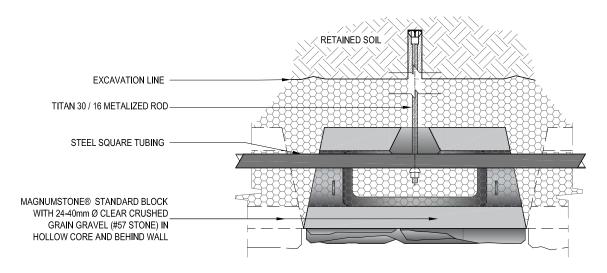


TOP VIEW

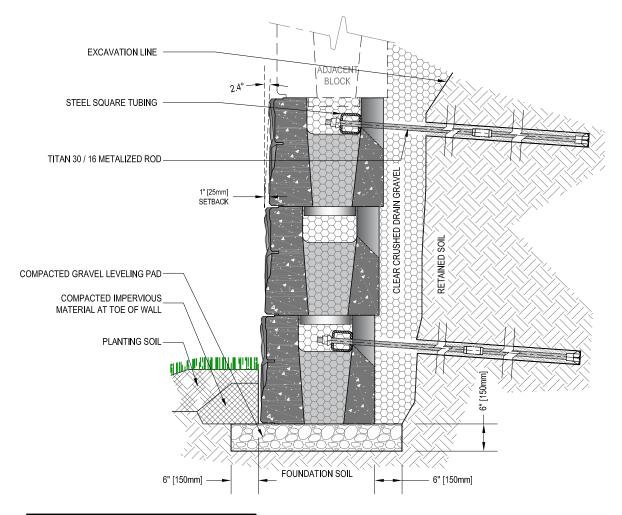


TYPICAL CROSS SECTION

MAGNUMSTONE™ SOIL NAILING

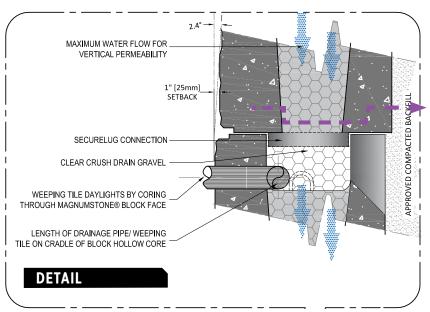


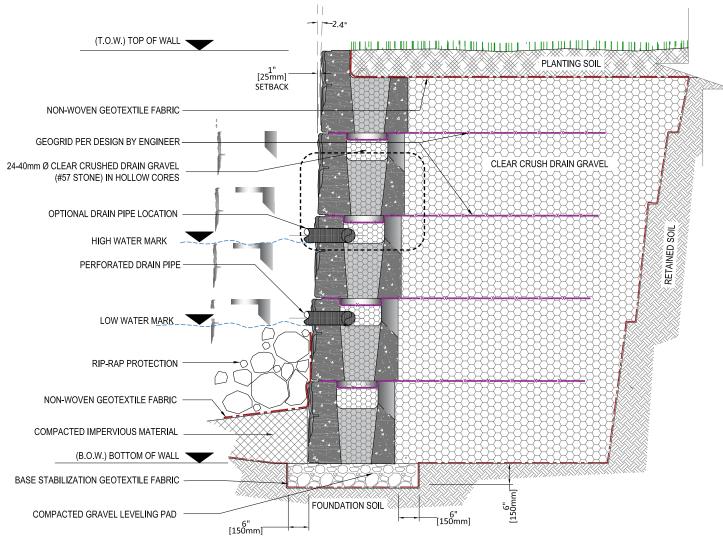
TOP VIEW



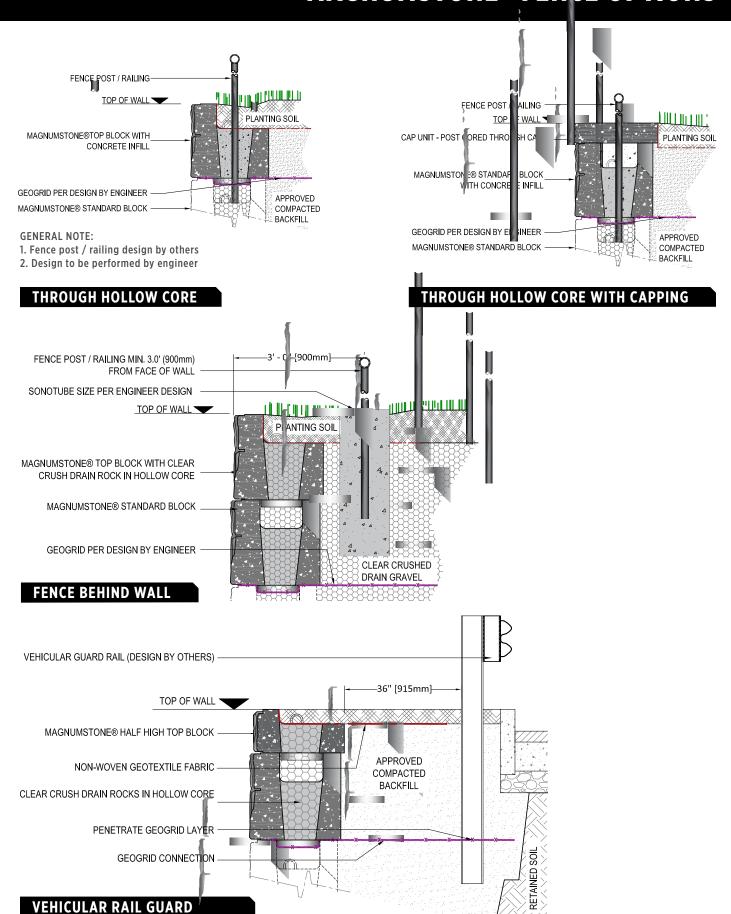
TYPICAL CROSS SECTION

MAGNUMSTONE™ WATER APPLICATION/DRAINAGE

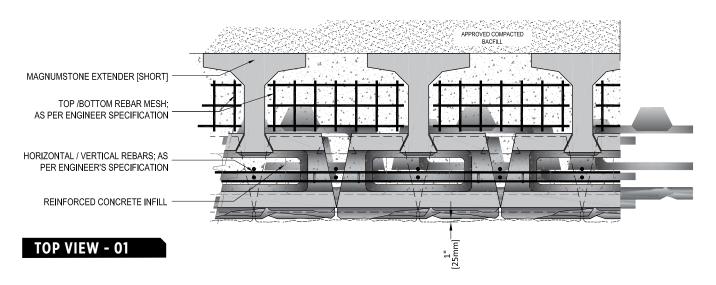


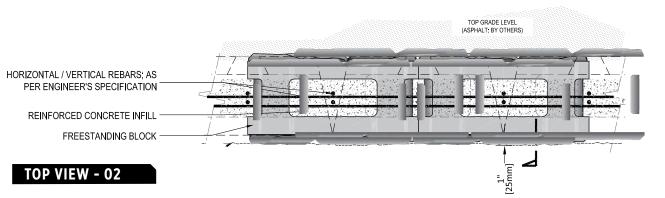


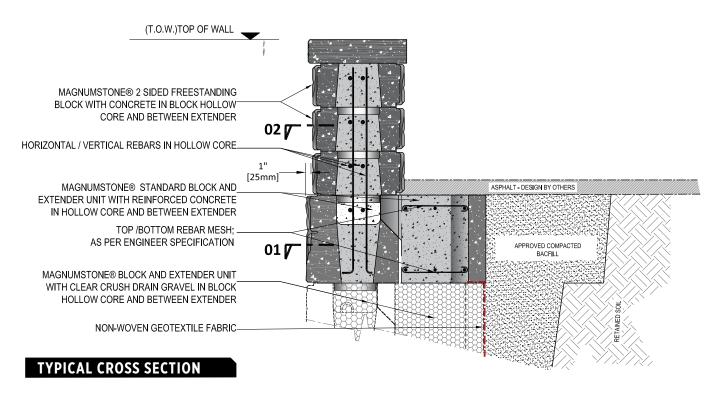
MAGNUMSTONE™ FENCE OPTIONS



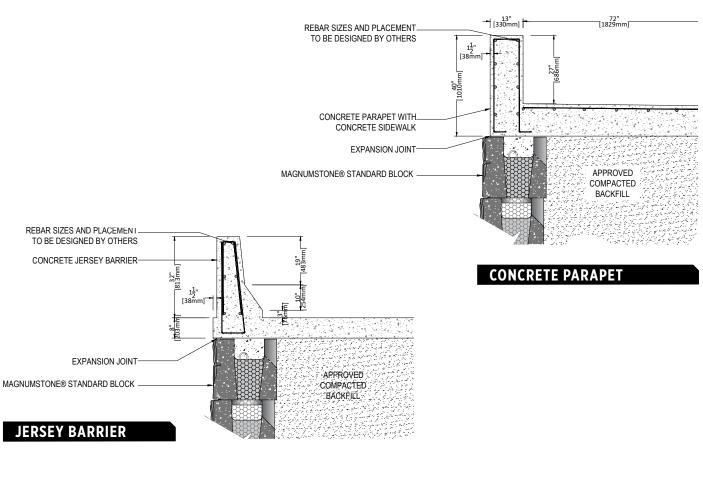
MAGNUMSTONE™ FREE STANDING PARAPET WALL

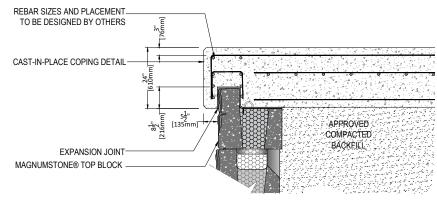


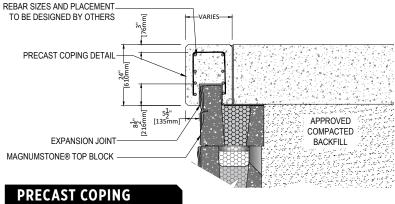




MAGNUMSTONE™ TOP OF WALL BARRIER OPTIONS







CAST-IN-PLACE COPING

