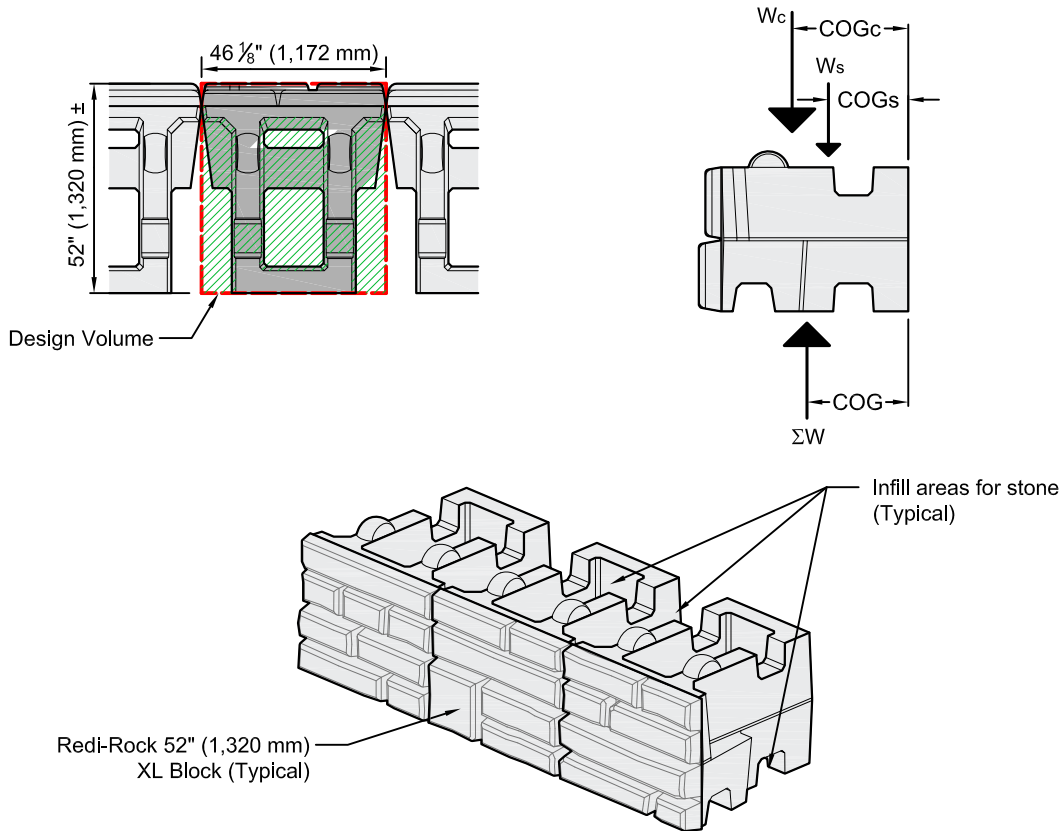


HOLLOW CORE RETAINING BLOCKS

# Infill Weight Calculations

R-5236HC 52" HOLLOW CORE RETAINING BLOCK WITH CRUSHED STONE INFILL



## INFILLED UNIT WEIGHT CALCULATIONS

### CONCRETE

Design Unit Weight = 143 pcf (2,291 kg/m<sup>3</sup>)

### LEDGESTONE FACE TEXTURE

Average Volume (Vc) 23.29 cft (0.66 m<sup>3</sup>) (From CAD Model)  
 Concrete Block Weight (Wc) 23.29 cft x 143 pcf = 3,331 lbs (1,511 kg)  
 Average Center of Gravity (COGc) 29.0 in (737 mm) (From CAD Model)

### INFILL

Design Unit Weight = 100 pcf (1,602 kg/m<sup>3</sup>)

Material considered as infill includes the crushed stone between adjacent blocks and in the hollow cores within the blocks.

Volume (Vs) 22.88 cft (0.65 m<sup>3</sup>) (From CAD Model)  
 Infill Soil Weight (Ws) 22.88 cft x 100 pcf = 2,288 lbs (1,038 kg)  
 Center of Gravity (COGs) 20.0 in (507 mm) (From CAD Model)

### DESIGN VOLUME & CENTER OF GRAVITY

52 in x 46.125 in x 36 in = 49.97 cft  
 (1.321 m x 1.172 m x 0.914 m = 1.415 m<sup>3</sup>)  
 COG = (29.0 in (3,331 lbs) + 20.0 in (2,288 lbs)) / (3,331 lbs + 2,288 lbs) = 25.34 in (644 mm)

### INFILLED UNIT WEIGHT

#### LEDGESTONE FACE TEXTURE

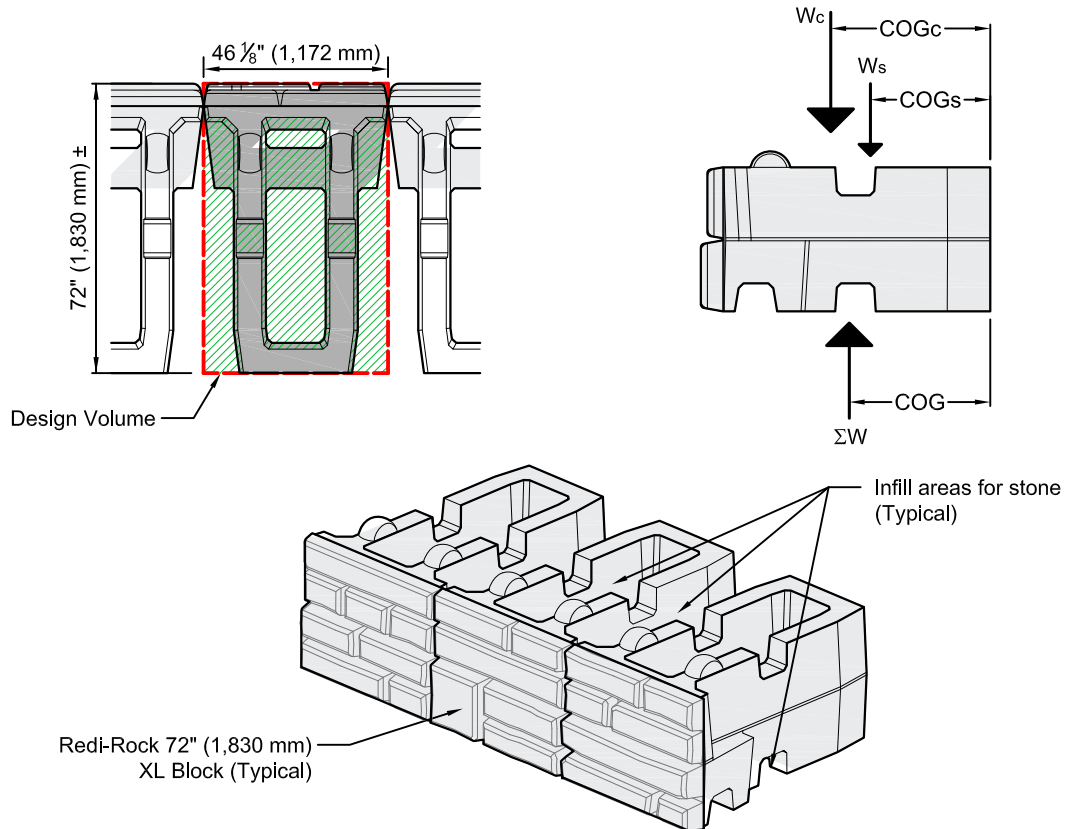
$\gamma_{INFILL} = (3,331 \text{ lb} + 2,288 \text{ lb}) / 49.97 \text{ cft} = \mathbf{112.4 \text{ pcf}}$   
 ((1,511 kg + 1,038 kg) / 1.415 m<sup>3</sup> = 1,801 kg/m<sup>3</sup>)

NOTE: The infilled unit weights shown here are reference values. Several factors can cause the unit weights of both concrete and infill soil to vary. The designer should use sound engineering judgement when assigning an infilled unit weight value for analysis. For overturning analyses, AASHTO recommends limiting the infill soil weight to 80% of its theoretical maximum

HOLLOW CORE RETAINING BLOCKS

# Infill Weight Calculations

## R-7236HC 72" HOLLOW CORE RETAINING BLOCK WITH CRUSHED STONE INFILL



### INFILLED UNIT WEIGHT CALCULATIONS

#### CONCRETE

Design Unit Weight = 143 pcf (2,291 kg/m<sup>3</sup>)

#### LEDGESTONE FACE TEXTURE

Average Volume (Vc)	29.10 cft (0.82 m <sup>3</sup> ) (From CAD Model)
Concrete Block Weight (Wc)	29.10 cft x 143 pcf = 4,162 lbs (1,888 kg)
Average Center of Gravity (COGc)	39.9 in (1,013 mm) (From CAD Model)

#### INFILL

Design Unit Weight = 100 pcf (1,602 kg/m<sup>3</sup>)

Material considered as infill includes the crushed stone between adjacent blocks and in the hollow cores within the blocks.

Volume (Vs)	36.29 cft (1.03 m <sup>3</sup> ) (From CAD Model)
Infill Soil Weight (Ws)	36.29 cft x 100 pcf = 3,629 lbs (1,646 kg)
Center of Gravity (COGs)	30.0 in (762 mm) (From CAD Model)

#### DESIGN VOLUME & CENTER OF GRAVITY

72 in x 46.125 in x 36 in = 69.19 cft  
 (1.829 m x 1.172 m x 0.914 m = 1.959 m<sup>3</sup>)  
 COG = (39.9 in (4,162 lbs) + 30.0 in (3,629 lbs)) / (4,162 lbs + 3,629 lbs) = 35.26 in (896 mm)

#### INFILLED UNIT WEIGHT

##### LEDGESTONE FACE TEXTURE

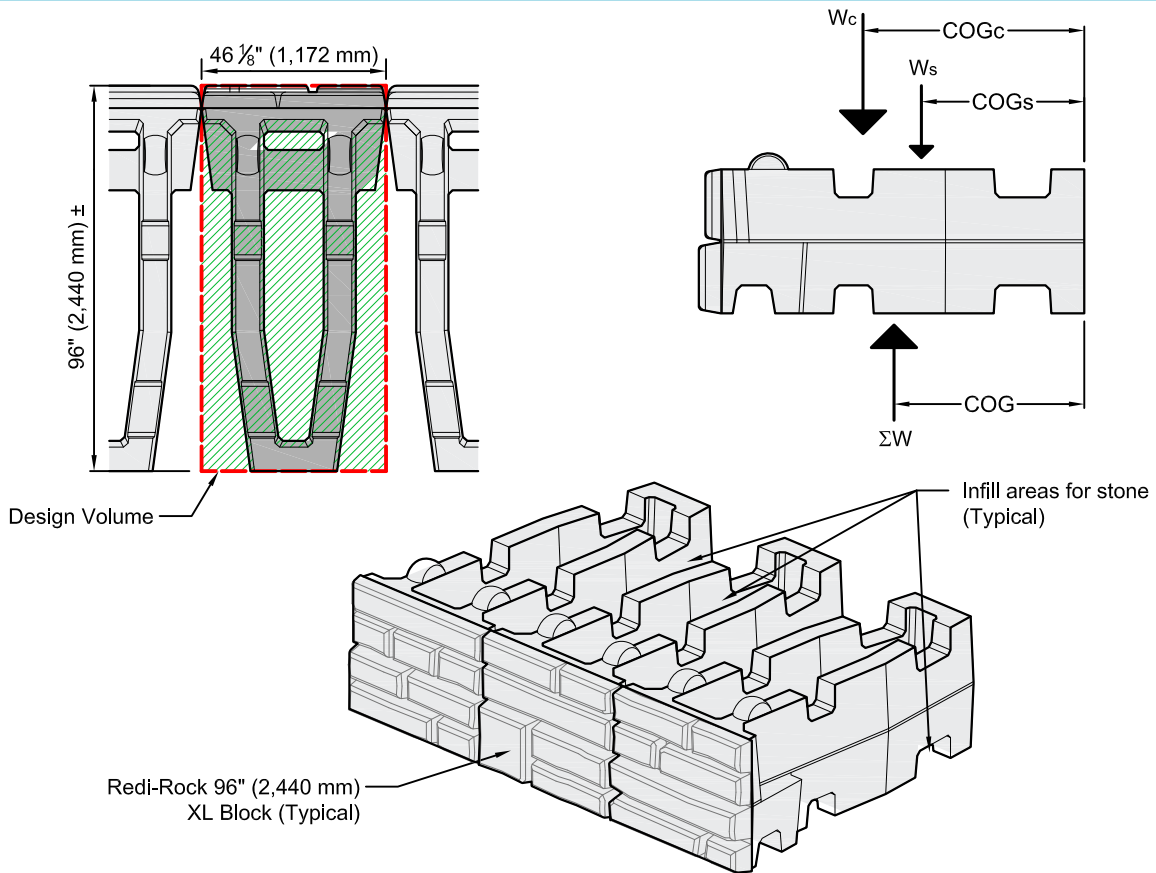
$\gamma_{INFILL} = (4,162 \text{ lb} + 3,629 \text{ lb}) / 69.19 \text{ cft} = \mathbf{112.6 \text{ pcf}}$   
 ((1,888 kg + 1,646 kg) / 1.959 m<sup>3</sup> = 1,804 kg/m<sup>3</sup>)

NOTE: The infilled unit weights shown here are reference values. Several factors can cause the unit weights of both concrete and infill soil to vary. The designer should use sound engineering judgement when assigning an infilled unit weight value for analysis. For overturning analyses, AASHTO recommends limiting the infill soil weight to 80% of its theoretical maximum

HOLLOW CORE RETAINING BLOCKS

# Infill Weight Calculations

R-9636HC 96" HOLLOW CORE RETAINING BLOCK WITH CRUSHED STONE INFILL



## INFILLED UNIT WEIGHT CALCULATIONS

### CONCRETE

Design Unit Weight = 143 pcf (2,291 kg/m<sup>3</sup>)

#### LEDGESTONE FACE TEXTURE

Average Volume (Vc) 33.83 cft (0.96 m<sup>3</sup>) (From CAD Model)  
 Concrete Block Weight (Wc) 33.83 cft x 143 pcf = 4,837 lbs (2,194 kg)  
 Average Center of Gravity (COGc) 55.3 in (1,405 mm) (From CAD Model)

### INFILL

Design Unit Weight = 100 pcf (1,602 kg/m<sup>3</sup>)

Material considered as infill includes the crushed stone between adjacent blocks and in the hollow cores within the blocks.

Volume (Vs) 54.63 cft (1.55 m<sup>3</sup>) (From CAD Model)  
 Infill Soil Weight (Ws) 54.63 cft x 100 pcf = 5,463 lbs (2,478 kg)  
 Center of Gravity (COGs) 40.7 in (1,034 mm) (From CAD Model)

### DESIGN VOLUME

96 in x 46.125 in x 36 in = 92.25 cft  
 (2.438 m x 1.172 m x 0.914 m = 2.612 m<sup>3</sup>)  
 COG = (55.3 in (4,837 lbs) + 40.7 in (5,463 lbs)) / (4,837 lbs + 5,463 lbs) = 47.57 in (1,208 mm)

### INFILLED UNIT WEIGHT

#### LEDGESTONE FACE TEXTURE

$\gamma_{INFILL} = (4,837 \text{ lb} + 5,463 \text{ lb}) / 92.25 \text{ cft} = \mathbf{111.7 \text{ pcf}}$   
 ((2,194 kg + 2,478 kg) / 2.612 m<sup>3</sup> = 2,161 kg/m<sup>3</sup>)

NOTE: The infilled unit weights shown here are reference values. Several factors can cause the unit weights of both concrete and infill soil to vary. The designer should use sound engineering judgement when assigning an infilled unit weight value for analysis. For overturning analyses, AASHTO recommends limiting the infill soil weight to 80% of its theoretical maximum