

ABUTMENT BLOCKS

Velpont abutment blocks come in multiple lengths and configurations. They are machine-placed, wet-cast units manufactured from first purpose concrete and intended for bridge crossings. Velpont products are manufactured from structural-grade concrete mixes in accordance with State DOT specific requirements. They have excellent resistance to freeze-thaw, deicing chemical exposure, and submerged conditions in both fresh water and salt water applications.

Reinforcing steel bars shall be Grade 60 (Grade 420) Deformed Steel Bars for Concrete Reinforcement per AASHTO M31M/M31 (ASTM A615/A615M) unless otherwise specified in the contract documents. A minimum of 3 inch (76 mm) of concrete cover shall be maintained over all reinforcing steel bars unless noted otherwise.

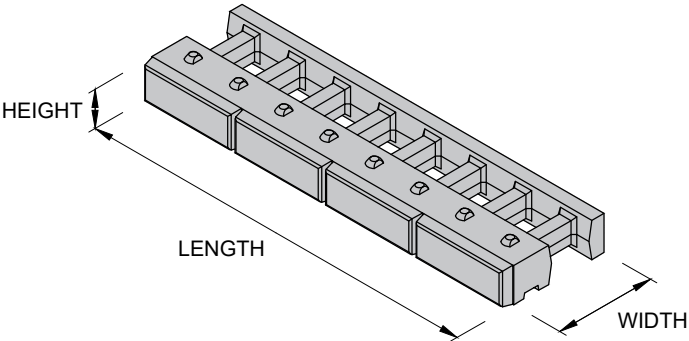
All Velpont products are manufactured and distributed through an international network of individually-owned, licensed precast concrete manufacturers.

CONCRETE MIX PROPERTIES ⁽¹⁾

FREEZE THAW EXPOSURE CLASS ⁽²⁾	MINIMUM 28 DAY COMPRESSIVE STRENGTH ⁽³⁾	MAXIMUM WATER CEMENT RATIO	NOMINAL MAXIMUM AGGREGATE SIZE	AGGREGATE CLASS DESIGNATION ⁽⁴⁾	AIR CONTENT ⁽⁵⁾
F2 (SEVERE)	5,000 psi (34.5 MPa)	0.45	1.0 (25)	B (3S)	6.0% ± 1.5%
F3 (VERY SEVERE)	6,000 psi (41.4 MPa)	0.40	1.0 (25)	A (4S)	6.0% ± 1.5%
MAXIMUM WATER-SOLUBLE CHLORIDE ION (Cl ⁻) CONTENT IN CONCRETE, PERCENT BY WEIGHT OF CEMENT ⁽⁶⁾					NONE
MAXIMUM PERCENTAGE OF TOTAL CEMENTITIOUS MATERIALS BY WEIGHT					
FLY ASH OR OTHER POZZOLANS ⁽⁷⁾		25	SILICA FUME ⁽⁹⁾		10
SLAG ⁽⁸⁾		50	ALKALI-AGGREGATE REACTIVITY MITIGATION ⁽¹⁰⁾		

REFERENCE DIMENSIONS

- HEIGHT = VERTICAL DIMENSION
- LENGTH = HORIZONTAL DIMENSION
PARALLEL TO THE TEXTURED FACE
- WIDTH = HORIZONTAL DIMENSION
PERPENDICULAR TO THE TEXTURED FACE



DIMENSIONAL TOLERANCES ⁽¹¹⁾ ⁽¹²⁾

HEIGHT	18 ± 1/8 (457 ±3)
LENGTH	DIMENSIONED LENGTH ± 1/2 (13)
WIDTH	DIMENSIONED WIDTH ± 1/2 (13), PLUS APPROXIMATELY 5 1/2 (140) FACE TEXTURE

⁽¹⁾ Concrete mix properties shall be in accordance with State DOT specifications. In the absence of more stringent State DOT specifications, these requirements are minimum standards intended to provide precast concrete products with good durability and performance.

⁽²⁾ AASHTO Exposure Category F.

⁽³⁾ Test method AASHTO T 22 (ASTM C 39).

⁽⁴⁾ Defined in AASHTO M 80 Table 1 (ASTM C 33 Table 3) *Limits for Deleterious Substances and Physical Property Requirements of Coarse Aggregate for Concrete*.

⁽⁵⁾ Test method AASHTO T 152 (ASTM C 231).

⁽⁶⁾ Water soluble chloride shall be limited to no more than trace amounts (from impurities in concrete-making components, not intended constituents.)

⁽⁷⁾ AASHTO M 295 (ASTM C 618).

⁽⁸⁾ AASHTO M 302 (ASTM C 989).

⁽⁹⁾ AASHTO M 307 (ASTM C 1240).

⁽¹⁰⁾ AASHTO R 80 (ACI 201).

⁽¹¹⁾ All dimensions are shown in units of *inches (mm) or feet (m)*.

⁽¹²⁾ Permissible defects: Chips smaller than 1.5 in (38 mm) in its largest dimension and cracks not wider than 0.012 in (0.305 mm) and not longer than 25% of the nominal height of the block; bug holes in the architectural face smaller than 0.75 in (19 mm); and bug holes, water marks, and color variation on non-architectural faces.

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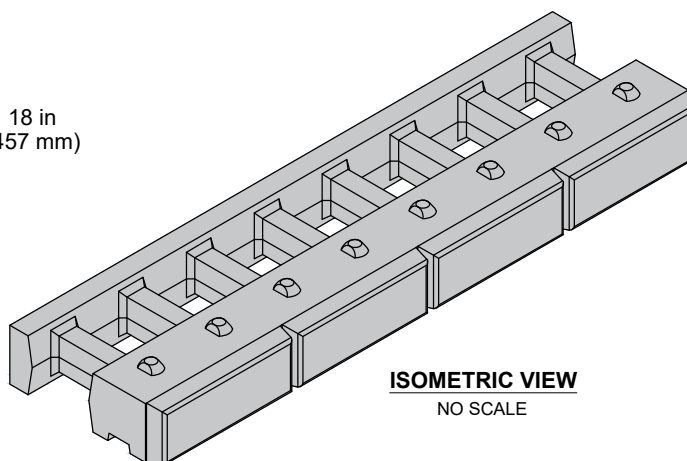
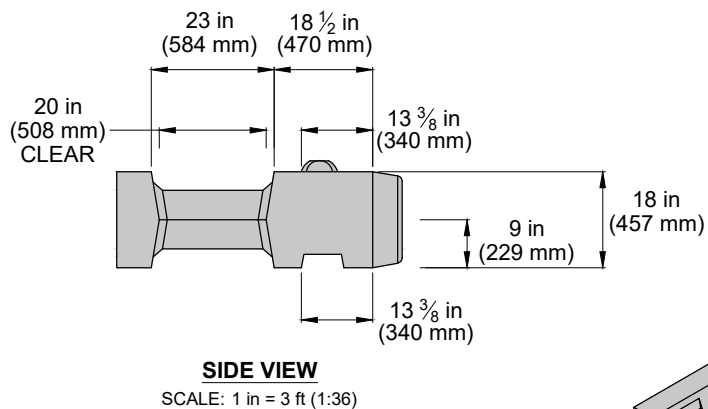
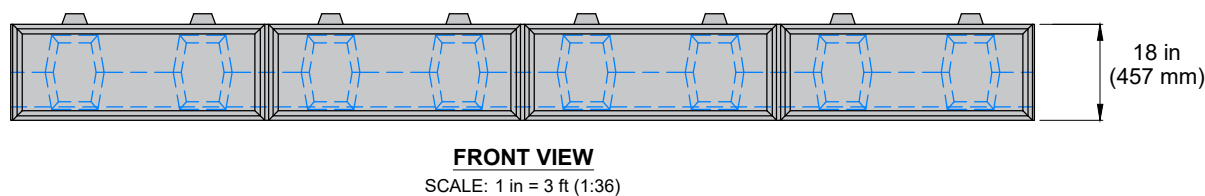
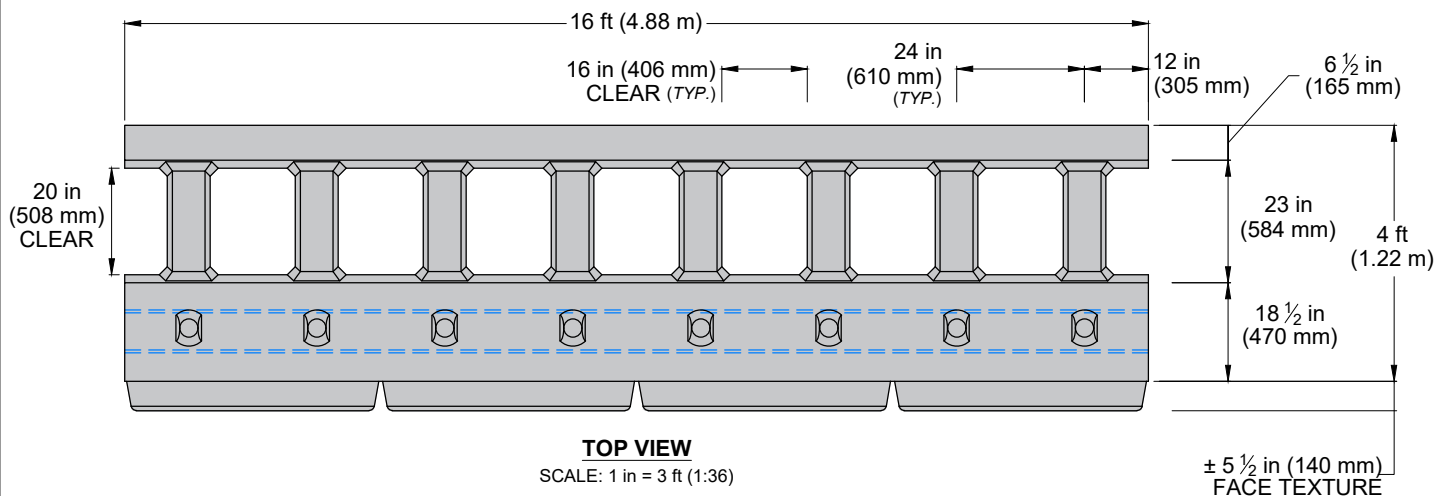
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TITLE:
**VELPONT ABUTMENT BLOCKS
MATERIAL SPECIFICATION**

FILE:
VELPONT BLOCK LIBRARY 15DEC2025.dwg

Velpont[®]

8212 M-119 Harbor Springs, MI 49740
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16 ft (4.88 m) BOTTOM / MIDDLE ABUTMENT BLOCK
WITH INTERLOCKING KNOB AND GROOVE
BLOCK VOLUME = 2.56 yd³ (1.96 m³)
BLOCK WEIGHT = 10,400 lb (4,717 kg)
VOID VOLUME = 1.30 yd³ (1.00 m³)

PRODUCT ID = AB-ST-1600-0400-0106-KN-LS-0000-0000

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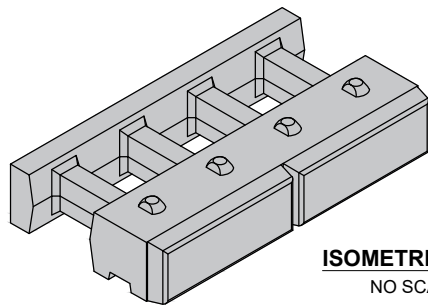
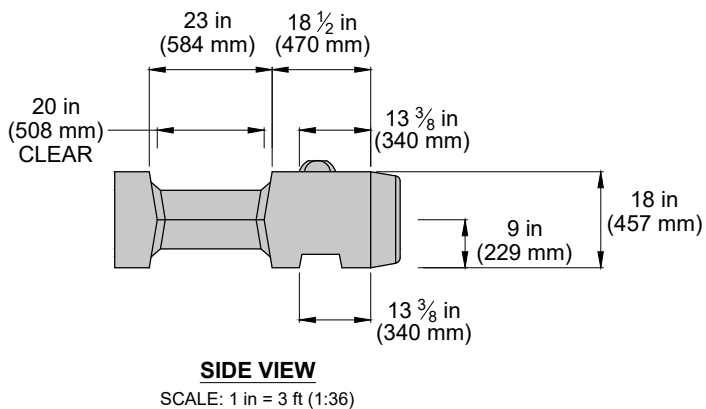
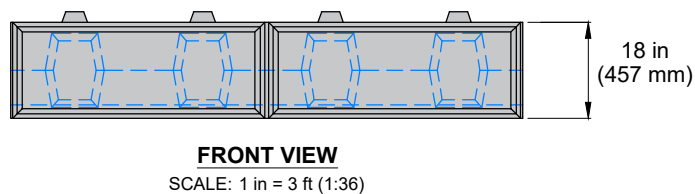
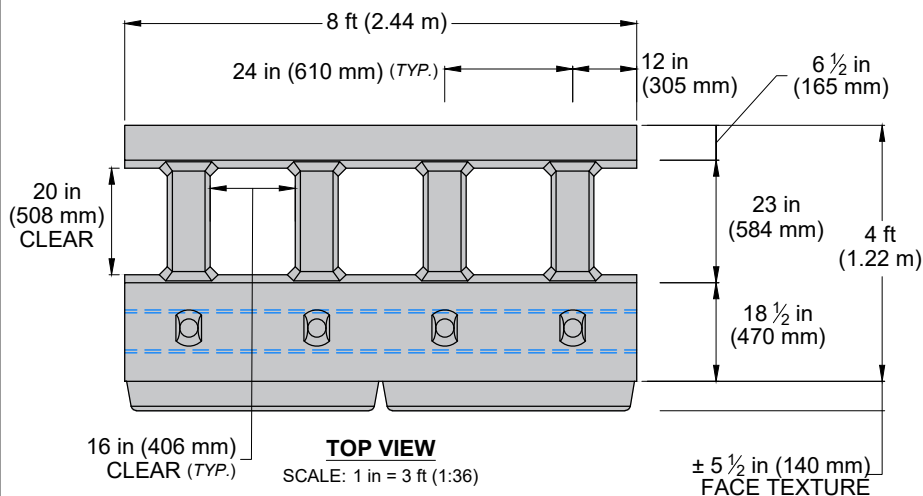
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**16 ft (4.88 m) BOTTOM / MIDDLE
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8 ft (2.44 m) BOTTOM / MIDDLE ABUTMENT BLOCK
WITH INTERLOCKING KNOB AND GROOVE
BLOCK VOLUME = 1.28 yd³ (0.98 m³)
BLOCK WEIGHT = 5,200 lb (2,359 kg)
VOID VOLUME = 0.65 yd³ (0.50 m³)

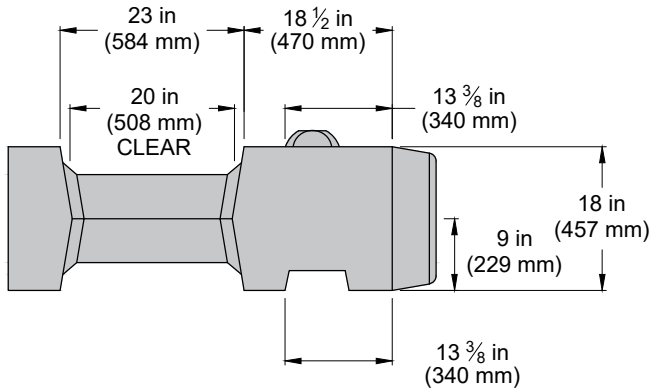
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TITLE:
**8 ft (2.44 m) BOTTOM / MIDDLE
ABUTMENT BLOCK**
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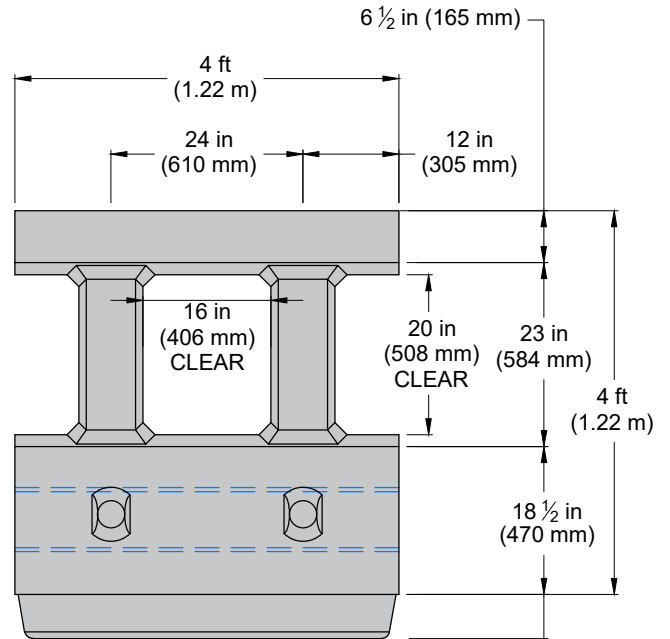
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SIDE VIEW

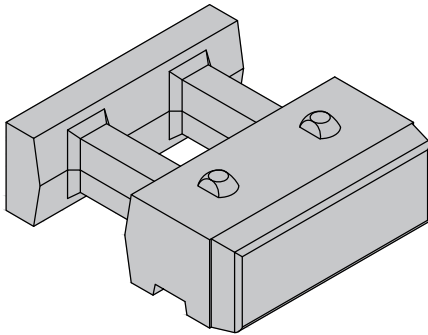
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TOP VIEW

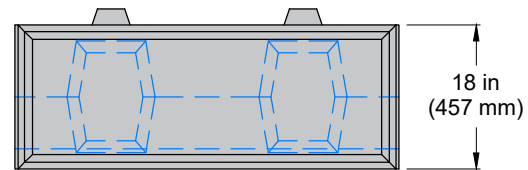
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±5 1/2 in (140 mm)
FACE TEXTURE



ISOMETRIC VIEW

NO SCALE



FRONT VIEW

SCALE: 1 in = 2 ft (1:24)

4 ft (1.22 m) BOTTOM / MIDDLE ABUTMENT BLOCK

WITH INTERLOCKING KNOB AND GROOVE

BLOCK VOLUME = 0.64 yd³ (0.49 m³)

BLOCK WEIGHT = 2,600 lb (1,179 kg)

VOID VOLUME = 0.33 yd³ (0.25 m³)

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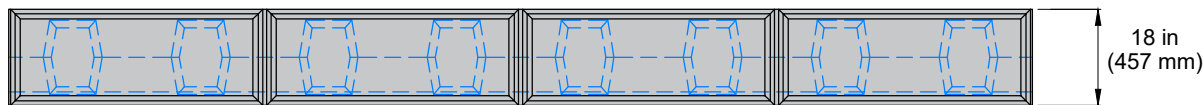
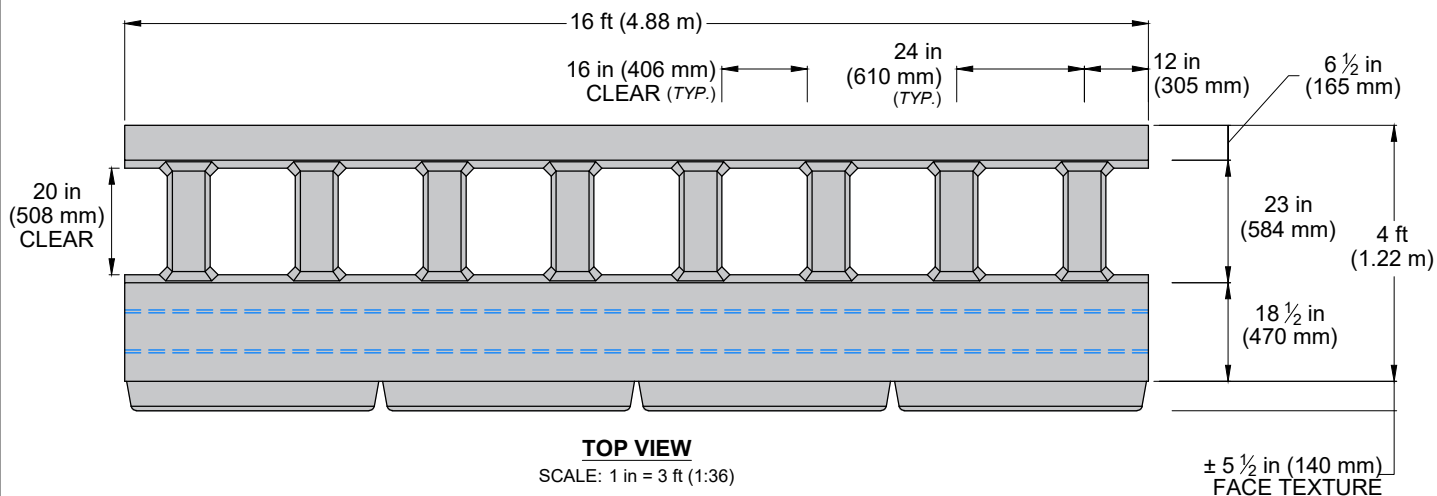
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TITLE:
**4 ft (1.22 m) BOTTOM / MIDDLE
ABUTMENT BLOCK**

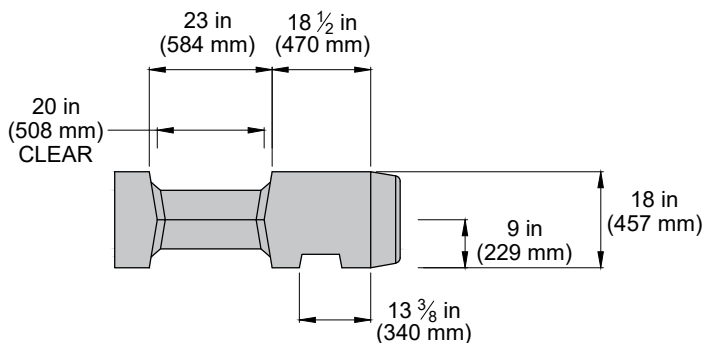
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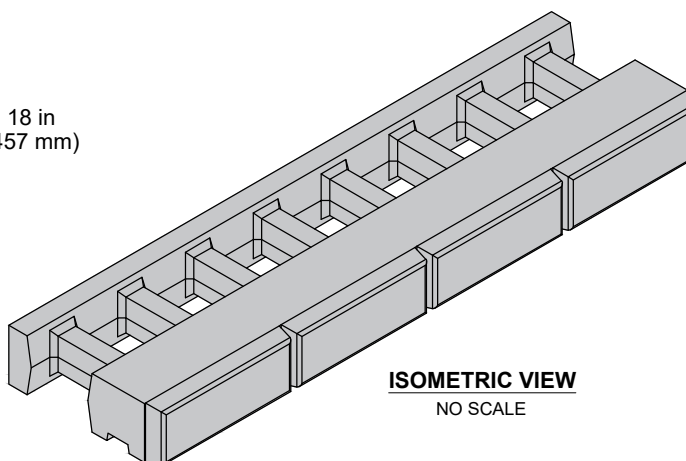
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FRONT VIEW
SCALE: 1 in = 3 ft (1:36)



SIDE VIEW
SCALE: 1 in = 3 ft (1:36)



ISOMETRIC VIEW
NO SCALE

16 ft (4.88 m) FLAT TOP ABUTMENT BLOCK
WITH INTERLOCKING GROOVE
BLOCK VOLUME = 2.55 yd³ (1.95 m³)
BLOCK WEIGHT = 10,350 lb (4,695 kg)
VOID VOLUME = 1.30 yd³ (1.00 m³)

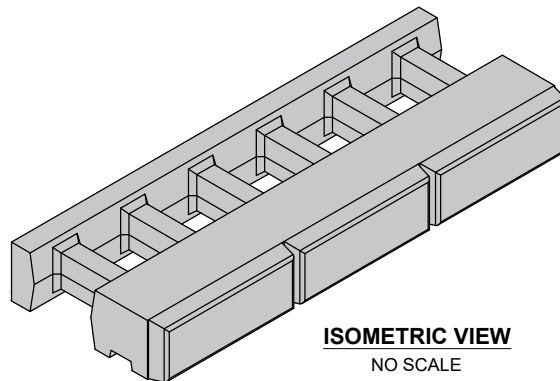
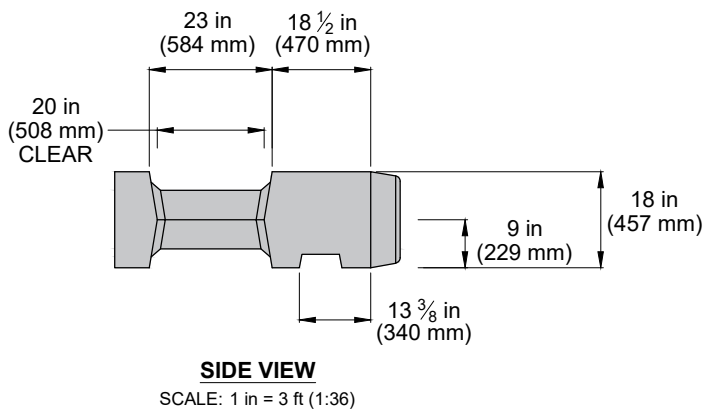
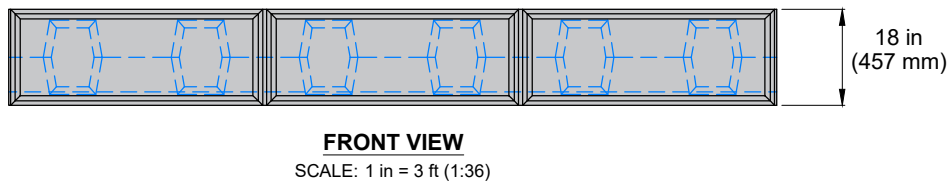
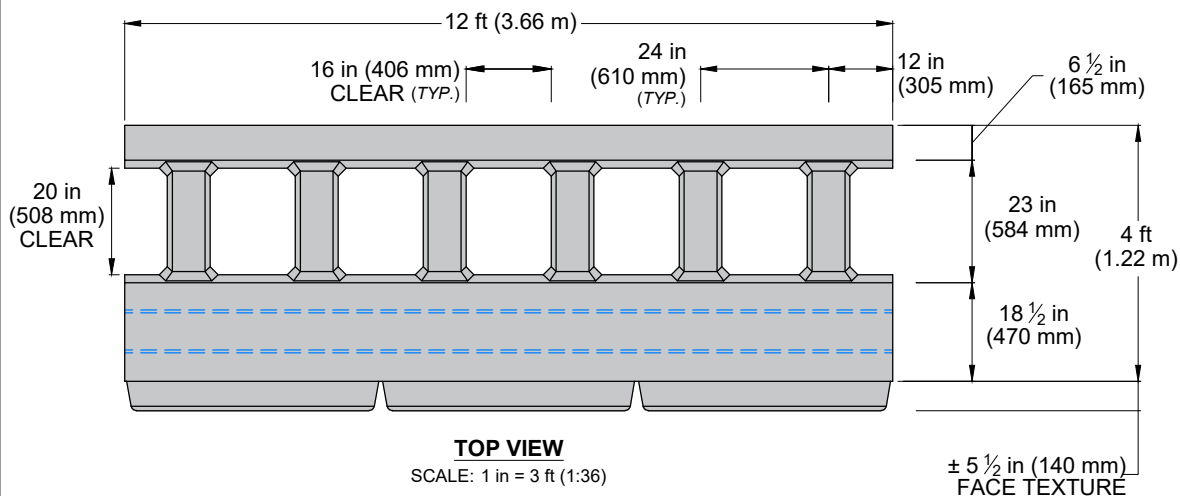
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TITLE:
**16 ft (4.88 m) FLAT TOP
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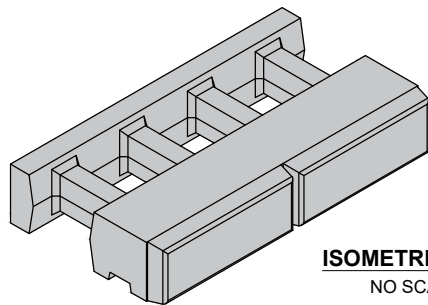
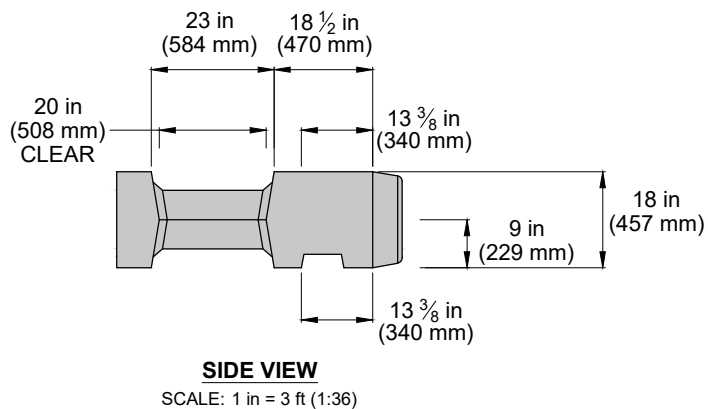
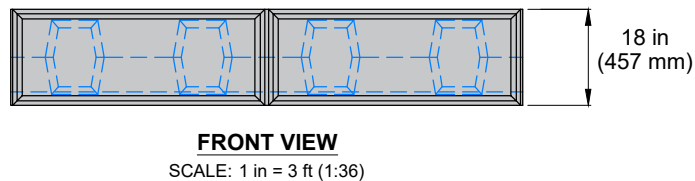
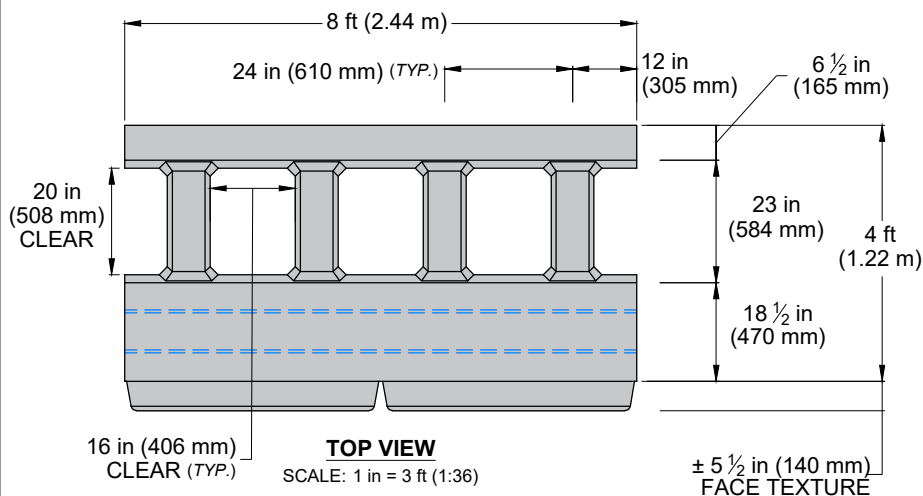
12 ft (3.66 m) FLAT TOP ABUTMENT BLOCK
WITH INTERLOCKING GROOVE
BLOCK VOLUME = 1.91 yd³ (1.46 m³)
BLOCK WEIGHT = 7,750 lb (3,515 kg)
VOID VOLUME = 0.97 yd³ (0.75 m³)

PRODUCT ID = **AB-ST-1200-0400-0106-FL-LS-0000-0000**

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TITLE:
**12 ft (3.66 m) FLAT TOP
ABUTMENT BLOCK**
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8 ft (2.44 m) FLAT TOP ABUTMENT BLOCK

WITH INTERLOCKING GROOVE

BLOCK VOLUME = 1.27 yd³ (0.97 m³)

BLOCK WEIGHT = 5,150 lb (2,336 kg)

VOID VOLUME = 0.65 yd³ (0.50 m³)

PRODUCT ID = **AB-ST-0800-0400-0106-FL-LS-0000-0000**

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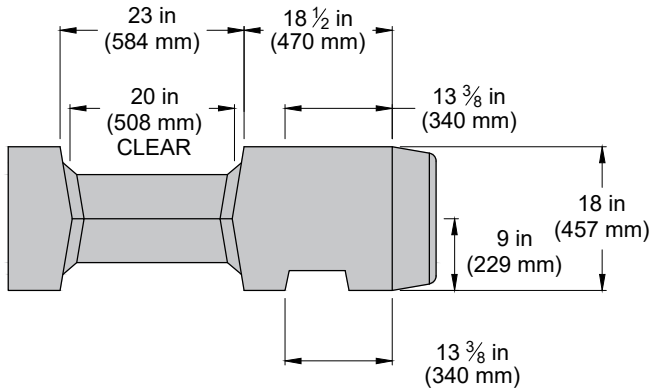
TITLE:

8 ft (2.44 m) FLAT TOP ABUTMENT BLOCK

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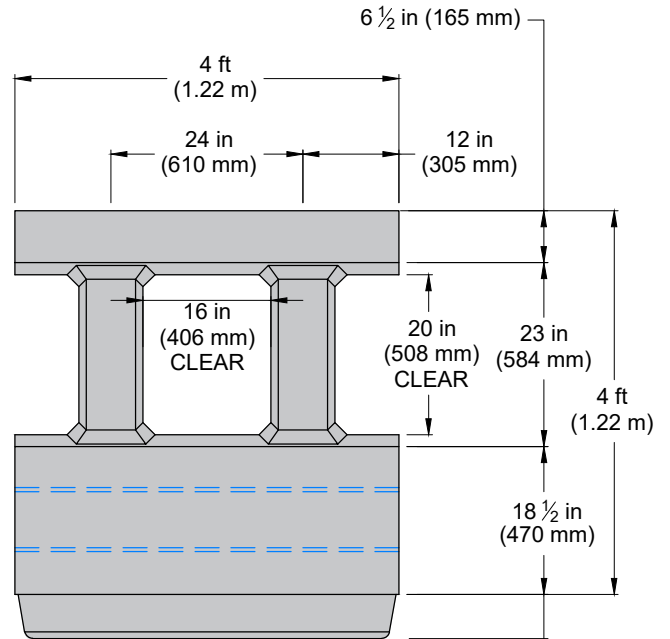
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SIDE VIEW

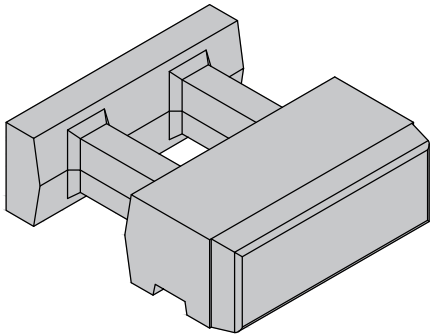
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TOP VIEW

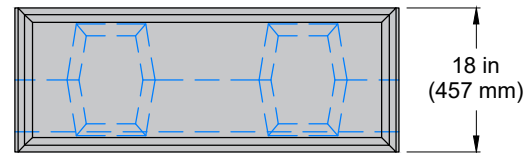
SCALE: 1 in = 2 ft (1:24)

±5 1/2 in (140 mm)
FACE TEXTURE



ISOMETRIC VIEW

NO SCALE



FRONT VIEW

SCALE: 1 in = 2 ft (1:24)

4 ft (1.22 m) FLAT TOP ABUTMENT BLOCK
WITH INTERLOCKING KNOB AND GROOVE
BLOCK VOLUME = 0.64 yd³ (0.49 m³)
BLOCK WEIGHT = 2,600 lb (1,179 kg)
VOID VOLUME = 0.33 yd³ (0.25 m³)

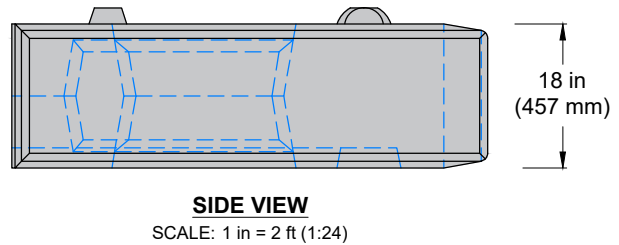
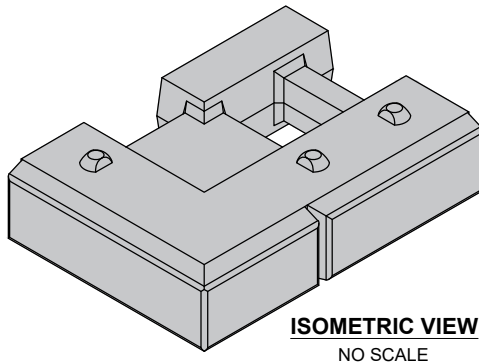
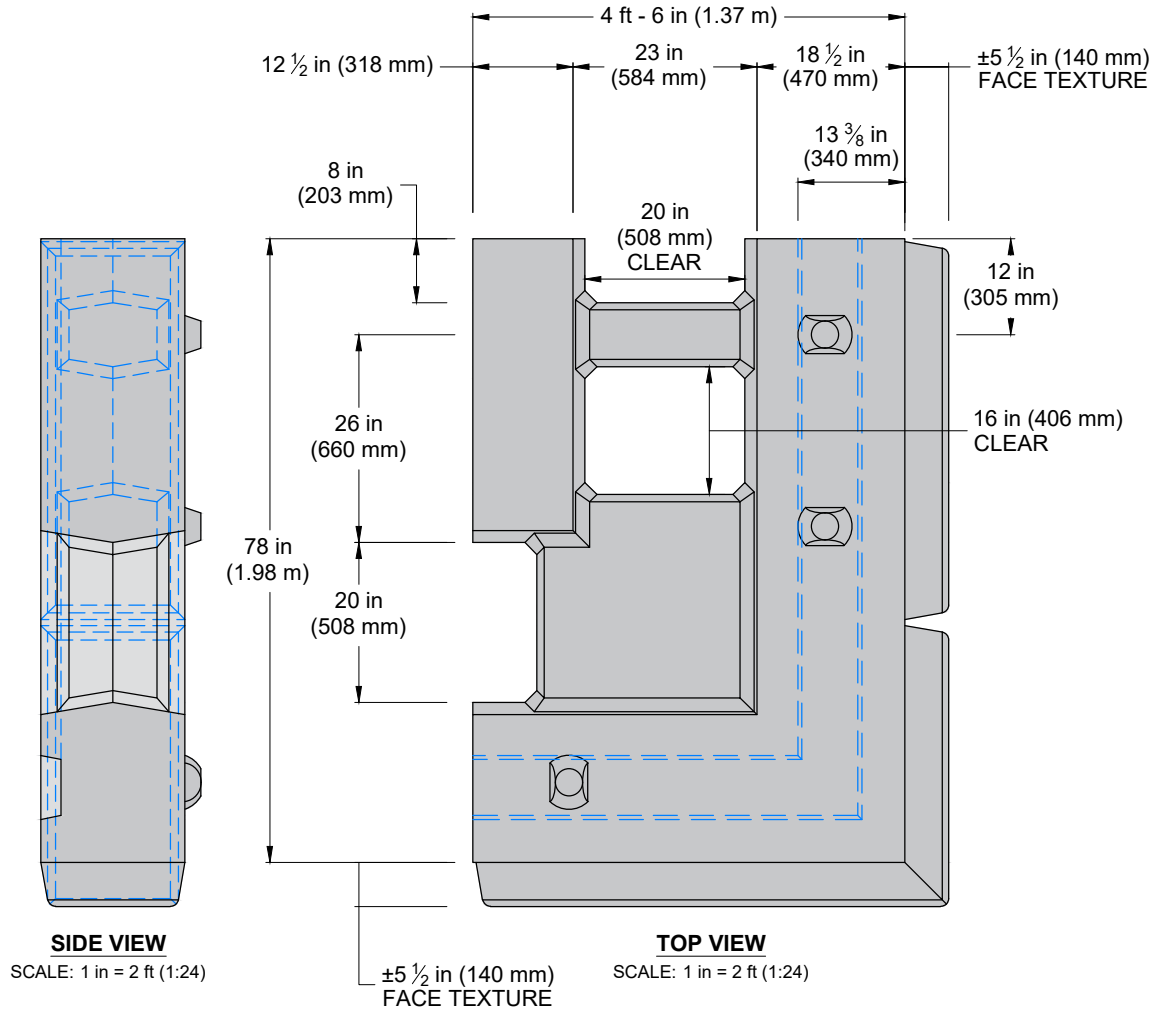
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TITLE: **4 ft (1.22 m) FLAT TOP ABUTMENT BLOCK**
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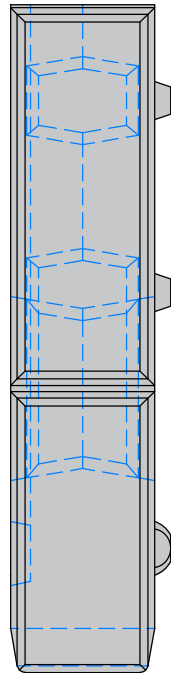
90° CORNER A BOTTOM / MIDDLE ABUTMENT BLOCK
 WITH INTERLOCKING KNOB AND GROOVE
 BLOCK VOLUME = 1.45 yd³ (1.11 m³)
 BLOCK WEIGHT = 5,850 lb (2,654 kg)
 VOID VOLUME = 0.40 yd³ (0.31 m³)

PRODUCT ID = **AB-90A-0606-0406-0106-KN-LS-0000-0000**

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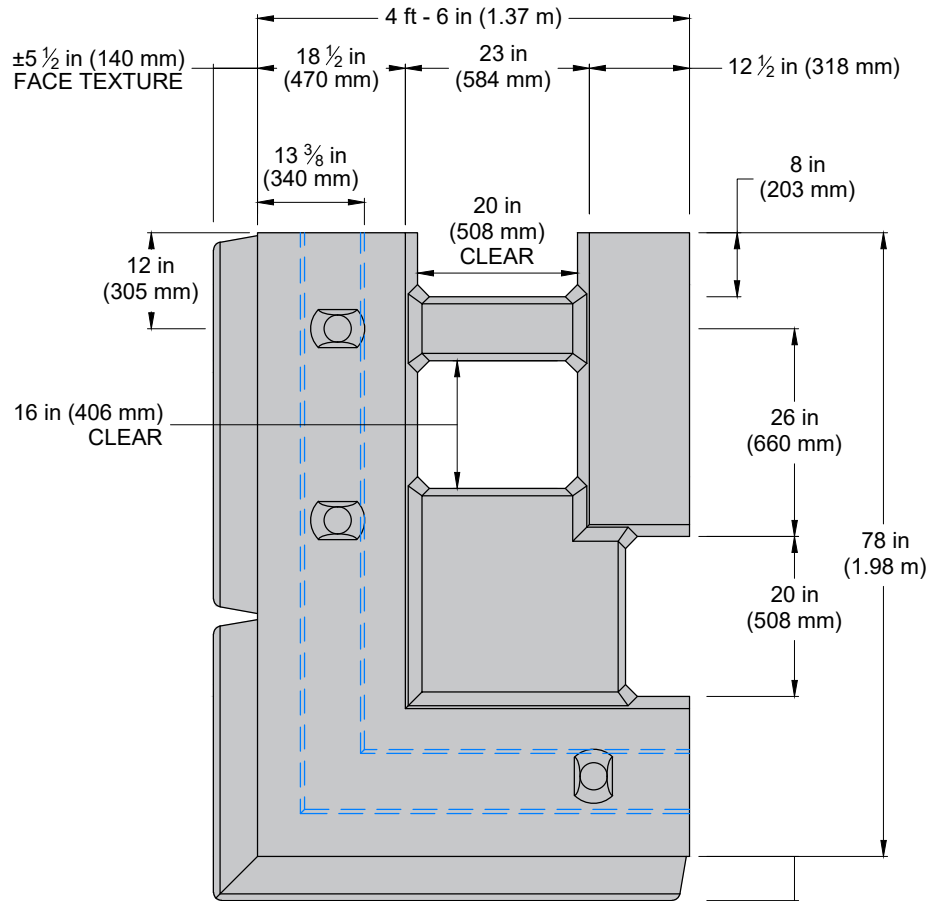
TITLE:
**90° CORNER A BOTTOM / MIDDLE
ABUTMENT BLOCK**
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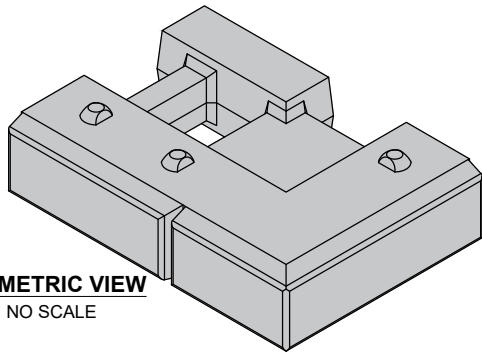
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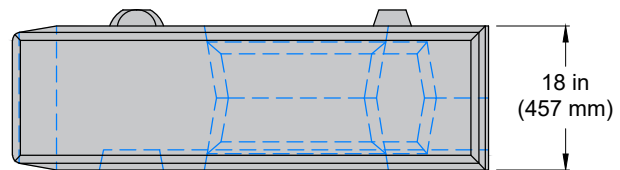
TOP VIEW

SCALE: 1 in = 2 ft (1:24)



ISOMETRIC VIEW

NO SCALE



SIDE VIEW

SCALE: 1 in = 2 ft (1:24)

90° CORNER B BOTTOM / MIDDLE ABUTMENT BLOCK
 WITH INTERLOCKING KNOB AND GROOVE
 BLOCK VOLUME = 1.45 yd³ (1.11 m³)
 BLOCK WEIGHT = 5,850 lb (2,654 kg)
 VOID VOLUME = 0.40 yd³ (0.31 m³)

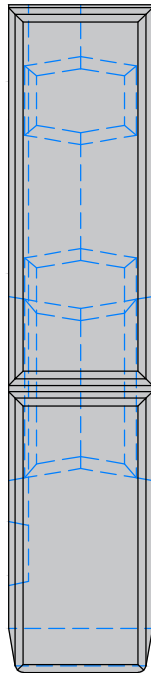
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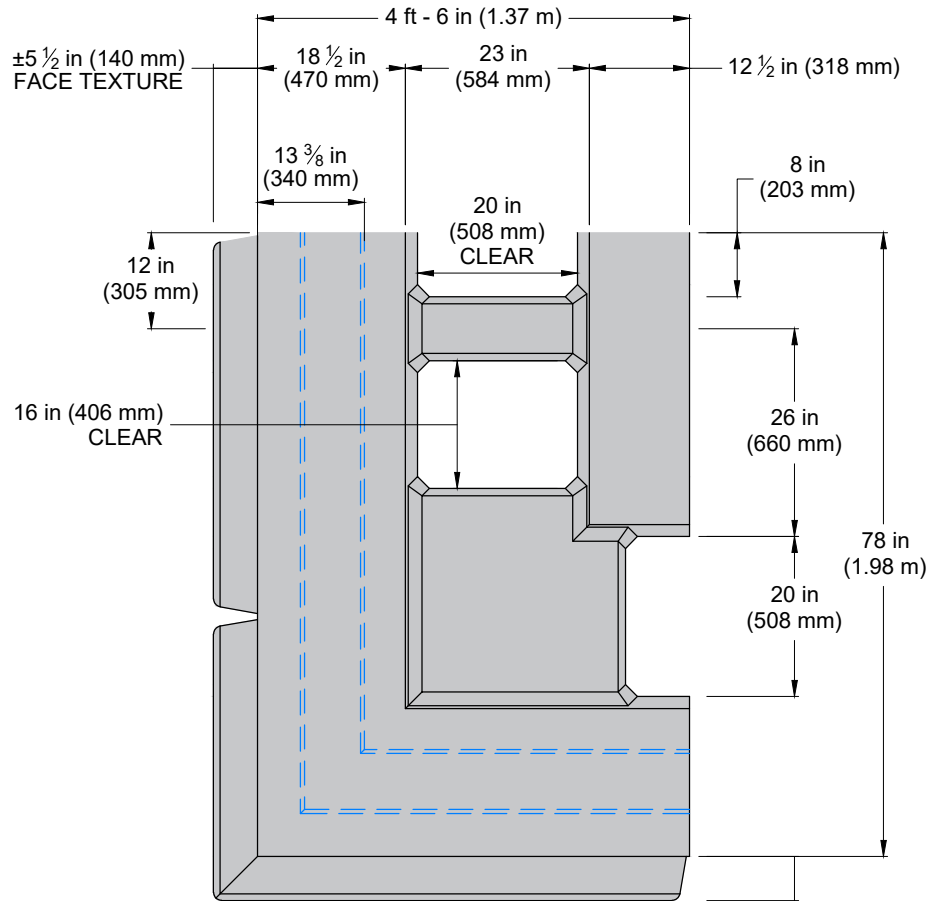
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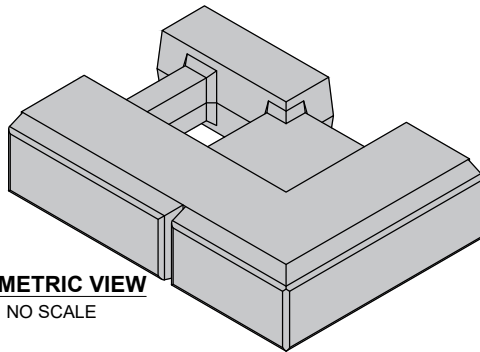
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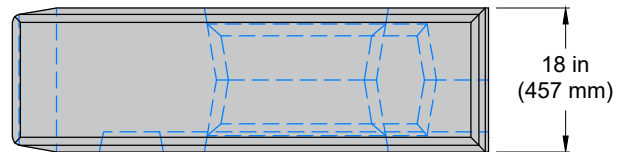
TOP VIEW

SCALE: 1 in = 2 ft (1:24)



ISOMETRIC VIEW

NO SCALE



SIDE VIEW

SCALE: 1 in = 2 ft (1:24)

90° CORNER B FLAT TOP ABUTMENT BLOCK

WITH INTERLOCKING GROOVE

BLOCK VOLUME = 1.44 yd³ (1.10 m³)

BLOCK WEIGHT = 5,850 lb (2,654 kg)

VOID VOLUME = 0.40 yd³ (0.31 m³)

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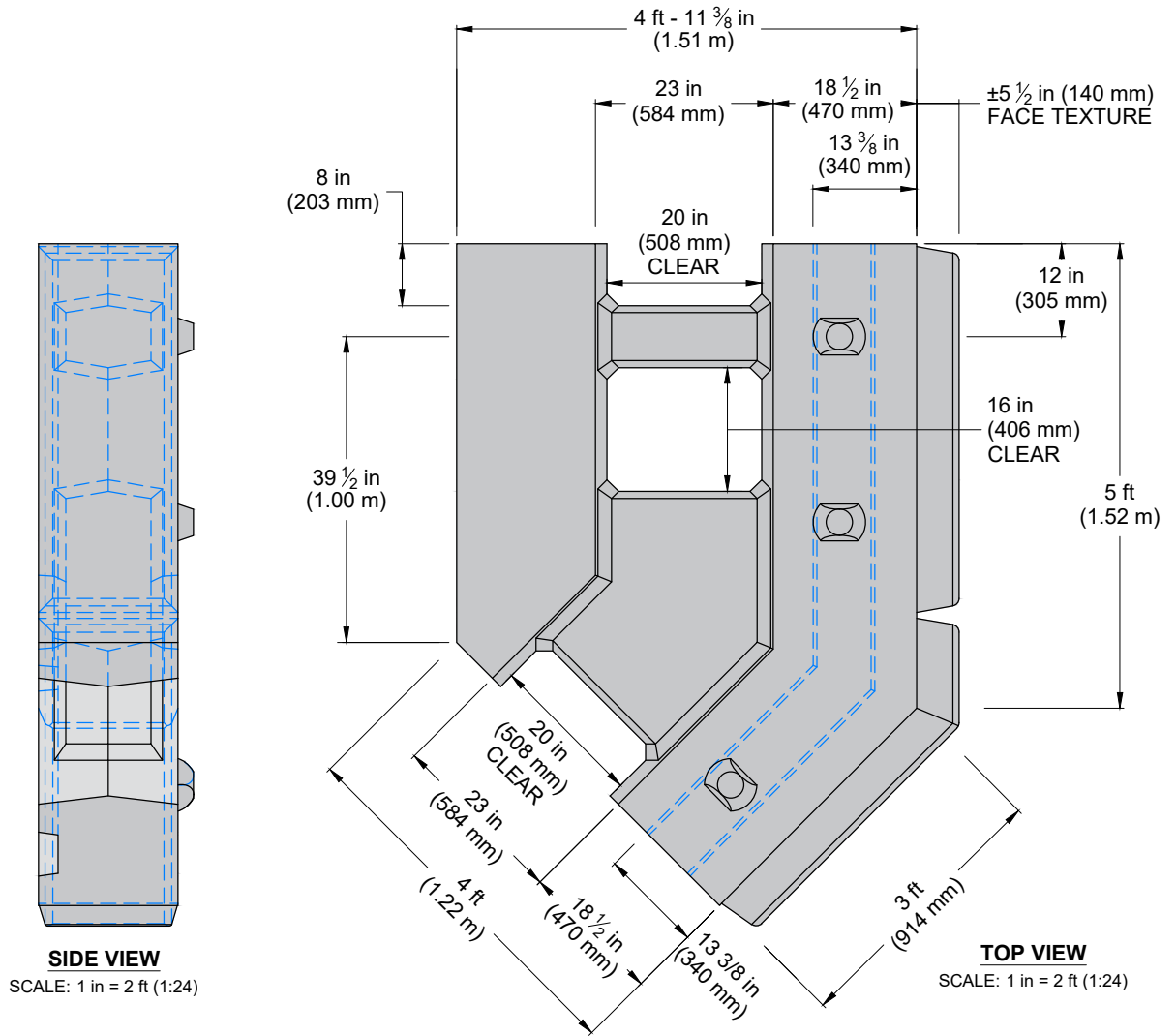
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ABUTMENT BLOCK**

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45° CORNER A BOTTOM / MIDDLE ABUTMENT BLOCK
 WITH INTERLOCKING KNOB AND GROOVE
 BLOCK VOLUME = 1.37 yd³ (1.05 m³)
 BLOCK WEIGHT = 5,550 lb (2,517 kg)
 VOID VOLUME = 0.40 yd³ (0.31 m³)

PRODUCT ID = **AB-45A-0500-0300-0106-KN-LS-0000-0000**

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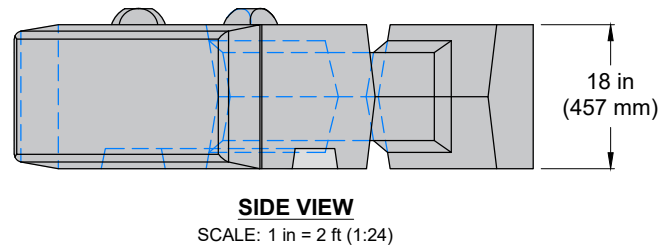
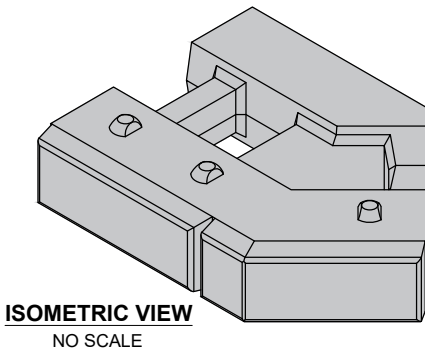
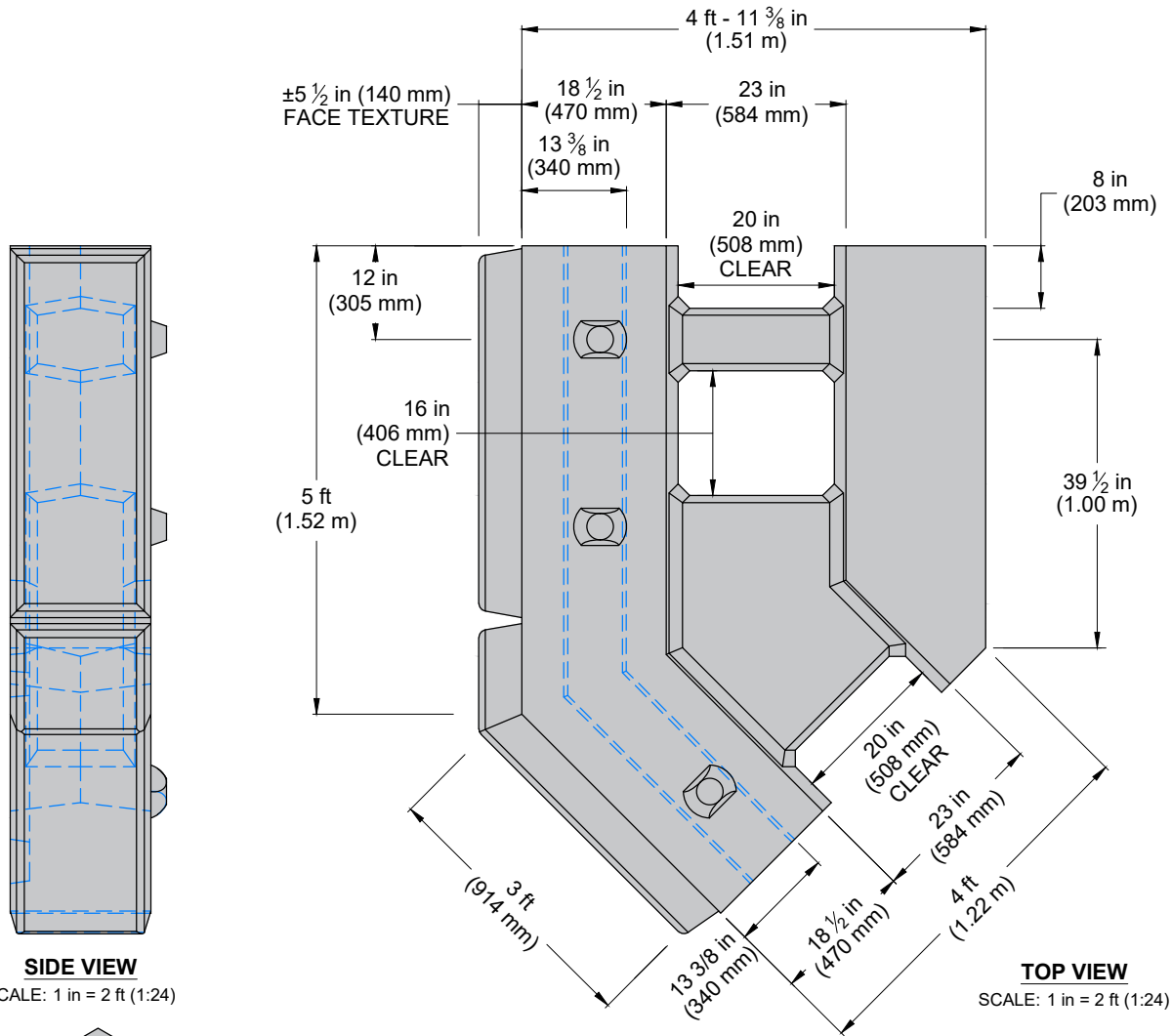
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**45° CORNER A BOTTOM / MIDDLE
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 BLOCK WEIGHT = 5,550 lb (2,517 kg)
 VOID VOLUME = 0.40 yd³ (0.31 m³)

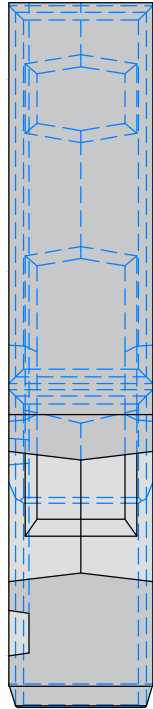
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TITLE:
**45° CORNER B BOTTOM / MIDDLE
ABUTMENT BLOCK**
FILE:
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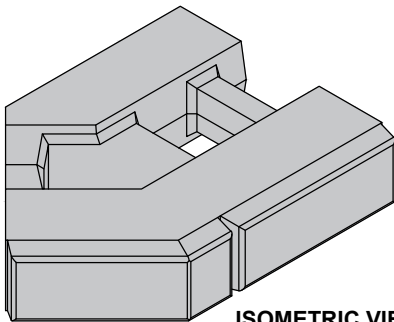
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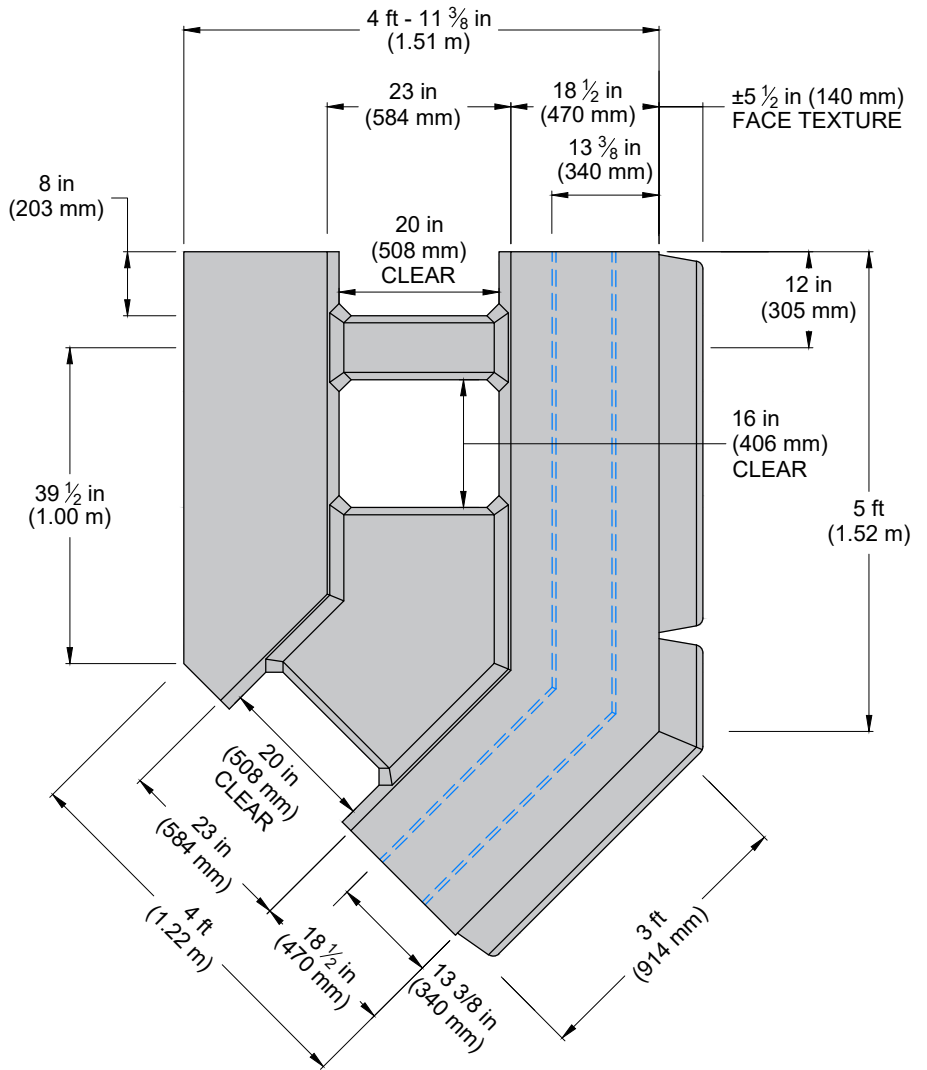
SIDE VIEW

SCALE: 1 in = 2 ft (1:24)



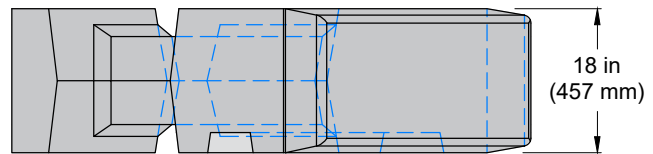
ISOMETRIC VIEW

NO SCALE



TOP VIEW

SCALE: 1 in = 2 ft (1:24)



SIDE VIEW

SCALE: 1 in = 2 ft (1:24)

45° CORNER A FLAT TOP ABUTMENT BLOCK

WITH INTERLOCKING KNOB AND GROOVE

BLOCK VOLUME = 1.36 yd³ (1.04 m³)

BLOCK WEIGHT = 5,550 lb (2,517 kg)

VOID VOLUME = 0.40 yd³ (0.31 m³)

PRODUCT ID = AB-45A-0500-0300-0106-FL-LS-0000-0000

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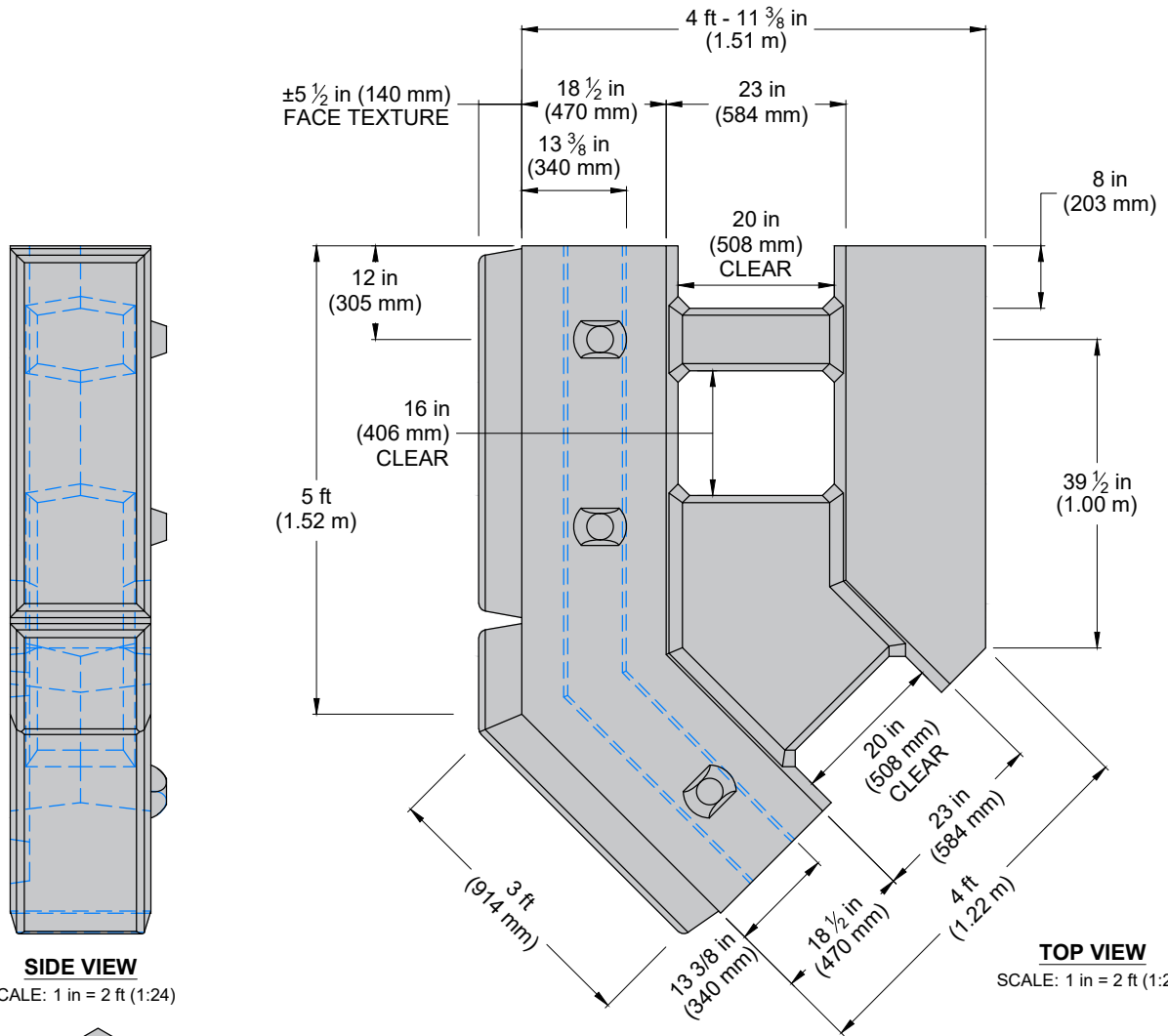
TITLE:

45° CORNER A FLAT TOP ABUTMENT BLOCK

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45° CORNER B FLAT TOP ABUTMENT BLOCK
 WITH INTERLOCKING KNOB AND GROOVE
 BLOCK VOLUME = 1.36 yd³ (1.04 m³)
 BLOCK WEIGHT = 5,550 lb (2,517 kg)
 VOID VOLUME = 0.40 yd³ (0.31 m³)

PRODUCT ID = **AB-45B-0500-0300-0106-FL-LS-0000-0000**

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45° CORNER B FLAT TOP ABUTMENT BLOCK

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