



1. Scope

This specification applies to one-piece, heavy-duty fiberglass bulkheads (hillside barriers) configured similar to the above drawing. These bulkheads will be used as a barrier to keep earth and rocks off vaults and padmounted equipment installed on a hill or sloping surface.

2. Dimensions

Fiberglass bulkheads shall be dimensioned as listed in the table below. Five (5) 3/4" holes shall be provided on bottom flange for staking purposes. Slight variations in these dimensions may be acceptable at the District's discretion.

Material ID	Dimension A (inches)	Dimension B (inches)	Dimension C (inches)
1001391	48	46	16
1001434	48	46	32
780743	58	58	18
780701	58	58	24
780793	58	58	36

3. Color

Bulkheads shall be dark green Munsell No. 7GY3.29/1.5.

4. Material

Bulkheads shall be fabricated of high strength fiberglass reinforces plastic (FRP) laminate. Glass content shall not be less than 33%. Only Aluminum Tri-Hydrate shall be permitted as a filler to a maximum lading of 43%. The exterior shall be covered with a smooth gel-coat finish containing UV stabilizers, pigment, and weather-resistant resins. Bulkheads shall be free of sharp edges and protruding fibers.

5. Manufacturing

Bulkheads shall be manufactured in a gel-coated female mold. FRP laminate shall be manufactured of at least two alternating layers of 1-1/2 ounce chopped fiberglass and 24 ounce woven roving and chopped fiberglass.

6. Fiber Retardancy

Bulkheads shall meet a Class II flame retardancy rating

7. Durability

Bulkheads shall have a minimum outdoor durability rating of 30 years when installed and exposed to the maritime climate of the Puget Sound region. Bulkheads shall be resistant to damage from normal shipping and handling.

8. Packaging

Bulkheads shall be shipped stacked (nested) on pallets, max. 4 bulkheads per pallet. Provisions shall be made to prevent finish abrasion between stacked bulkheads.