

Considerations for Design with Waterstop

Width of Waterstop

The width of the waterstop should not greater than the thickness of the concrete and should not be less than six times the aggregate size plus the joint width.

$$(6 * \text{Aggregate Size}) + \text{Joint Width} \leq \text{Waterstop Width} \leq \text{Concrete Thickness}$$

Coverage

The amount of coverage that the waterstop needs should be no less than one half of waterstop width minus the joint width or the embedment of the waterstop one side of the joint.

$$1/2(\text{Waterstop Width} - \text{Joint Width}) \leq \text{Coverage Concrete from Waterstop} \geq \text{Embedment of Waterstop}$$

Distance Minimum Between Waterstop & Reinforcement

All Waterstop should be at least two times the distance of the largest aggregate diameter.

$$\text{Distance Min. Waterstop \& Reinforcement} \geq 2 * \text{Largest Aggregate Diameter}$$

Waterstop Center Bulb Movement

The inside diameter of the center bulb should be greater than the movement of the joint or differential movement.

$$\text{Inside Diameter of Waterstop Center Bulb} \geq \text{Joint Movement or Differential Movement}$$

