

Concrete/Grout Cutoff Walls Construction Guidance Checklist

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Concrete/Grout Cutoff Wall Introduction

Cutoff Walls are used in stream construction to reduce seepage of subsurface water beneath a drop structure and prevent piping or erosion of underlying subgrade soils.



Concrete/Grout Cutoff Wall Introduction

- ~ Cutoff Wall materials are usually steel sheet pile or poured in place concrete or grout.
- ~ Concrete/Grout Cutoff Walls have varying depths and thicknesses depending on the application.
- ~ Concrete/Grout cutoff walls can either be formed or poured in an excavated trench.

Concrete/Grout Cutoff Wall - Installation

Formed Walls:

Some grout walls are formed with plywood.



Concrete/Grout Cutoff Wall - Installation

Reinforcing Steel:

Reinforcing steel rebar is specified for some cutoff walls. Verify rebar size and spacing.



Concrete/Grout Cutoff Wall - Installation

Formed Walls:

This grout wall had to be formed with plywood in order to follow the tight curvy layout of the drop structure crest.



Concrete/Grout Cutoff Wall - Installation

Trenched Walls:

Some grout cutoff walls are poured in an excavated trench. It is important that the existing soils have enough cohesion so that the trench sides hold-up and maintain shape prior and during the pour.



Concrete/Grout Cutoff Wall - Installation

Trenched Walls:

This cutoff wall was poured in a trench with sandy soils. The trench sides partially collapsed prior or during the pour leaving a big hole in the cutoff wall!



Concrete/Grout Cutoff Wall - Installation

Check Dimensions:

Verify that width and depth dimensions for the forms or trench of the cutoff wall match the dimensions on the plans. Some walls are poured to finished grades, and others are left low to allow topsoil to be placed over the concrete.



Concrete/Grout Cutoff Wall - Installation

Trenched Walls:

Verify that the trenches are clean and free of loose soil. If the cutoff wall is beneath a concrete drop structure as shown, make sure trenches are excavated prior to installing rebar!



Concrete/Grout Cutoff Wall - Materials

CONCRETE/GROUT MIX:

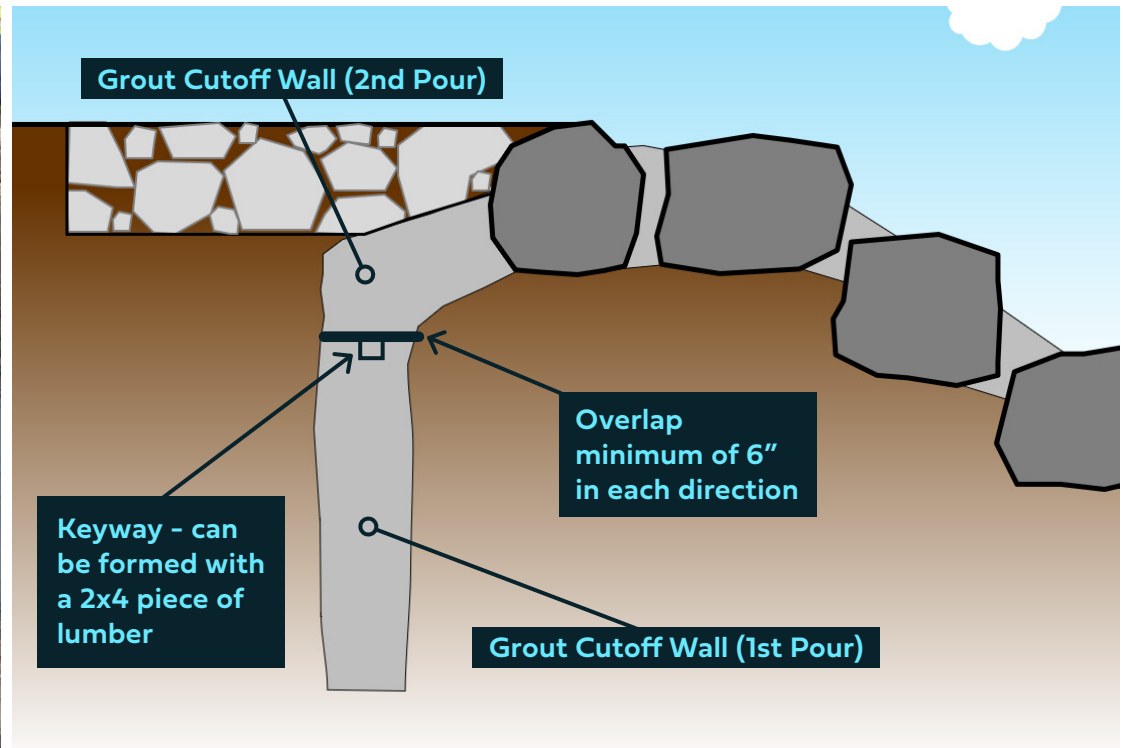
Check concrete truck ticket to verify that the concrete or grout mix matches what is called out in the specifications.



Concrete/Grout Cutoff Wall - Installation

WATERTIGHT CONNECTIONS IN MULTIPLE POURS:

Ideally grout cutoff walls are constructed monolithically with the rest of the drop structure. When grout cutoff walls have to be constructed in multiple pours, verify that a keyway is formed in the top of the cutoff wall for the 1st pour as shown, to provide a watertight connection with the subsequent 2nd grout pour. The 2nd grout pour should overlap the top of the first cutoff wall pour a minimum of 6-inches on each side of the keyway.



Concrete/Grout Cutoff Wall - Installation

Finished Installation:

This shows the finished installation of a formed grout cutoff wall for a grouted boulder drop structure.

