

**Supplemental Specification
2012 Standard Specification Book**

SECTION 02056M

EMBANKMENT, BORROW, AND BACKFILL

Delete Article 1.4, paragraph A and replace with the following:

- A. Well-graded material – Material having an even distribution of different particle sizes. This even distribution of particles of different sizes results in a dense mass upon compaction.

Delete Article 2.9, and replace with the following:

2.9 PIPE FOUNDATION, BEDDING, AND BACKFILL

- A. Pipe Foundation (When Required)
 - 1. Classification A-1. Refer to AASHTO M 145.
 - 2. Use suitable backfill material or granular backfill borrow when directed by Engineer.
 - 3. Use Free-Draining Granular Backfill or other uniformly graded materials only with the approval of the engineer and only if enclosed with an appropriate drainage geotextile. Refer to Section 02075.
 - 4. Overexcavate and replace unsuitable materials according to Section 02317 when directed by the Engineer.

- B. Pipe Bedding and Backfill
 - 1. Classification A-1. Refer to AASHTO M145.
 - 2. Non-plastic, well-graded material.
 - 3. Maximum aggregate size is 1½ inches for plastic pipe, 2 inches for all other pipes.

- C. Other materials/trench configurations for pipe bedding and backfill may be used only upon approval of the Contractor's engineering proposal. Proposals using this option may include the use of native material or uniformly graded materials enclosed in an appropriate drainage geotextile. The Department decides whether or not to consider or approve the Contractor's engineering proposal. Any proposal must include all of the following:
 - 1. Stamped drawings and specifications signed and sealed by a Professional Engineer licensed in the state of Utah.

2. Evaluation of site specific conditions and surrounding soils, including potential for migration of fines.
3. A structural evaluation of the pipe support system for the proposed pipe that includes the pipe structural capacity and the depth of fill.
4. Complete bedding or backfill source information including gradation, soil classification, and laboratory testing reports.

Delete Article 3.3, paragraphs C and D and replace with the following:

- C. Structural Backfill Placement includes bridges, foundation, box culverts, drains, and other structures.
 1. Place suitable backfill material in structural backfill sections. Refer to Section 02317.
 - a. Use granular backfill borrow when specified.
 2. Use appropriate compaction equipment adjacent to abutments, backwalls, approach slabs, wing walls, retaining walls, and other structures.
- D. Pipe Foundation, Bedding, and Backfill
 1. Refer to Section 02317 and DG Series Standard Drawings for excavation and over-excavation requirements.
 2. Imported material for pipe bedding and pipe backfill and embankment in the pipe trench are incidental when constructed according to the plans and specifications. No separate measurement or payment for these items will be made except for pipe foundation work or other over-excavation of unsuitable material beyond the limits indicated in the contract.
 3. Place uniform layers of pipe backfill on both sides of the pipe.
 4. Use compaction equipment smaller than the trench width between the pipe and the trench wall. Expand the width of the trench to accommodate necessary compaction equipment .
 5. Fully compact the haunch areas. Hand-tamp areas where compaction equipment cannot compact the soil.