

## Appendix B

The following types of concrete structures may be left-place under the prescribed conditions and in accordance with MnDOT Functional Area requirements. These structures are not subject to the MPCA General Permit for Disposal of Uncontaminated Concrete:

Depending on construction methods, it is not always possible because of motorist safety, engineering or environmental reasons to remove concrete structures during a road construction project. Many projects maintain traffic on a portion of the roadway while work is conducted on the other portion. This technique may be used when there is not a reasonable detour available, either because of added distance of the detour or capacity insufficiencies on alternate routes. Attempting to remove concrete structures from beneath or adjacent to active roadways may require creating staging areas to shift traffic, which introduces risk to motorists and workers by creating an unexpected condition for motorists increasing the probability for accidents.

Removing isolated structures that require deeper excavation than adjacent areas of roadway construction can result in settlement problems that can affect pavement performance in the future.

Removal of concrete structures may also affect the integrity of other structures adjacent to the project area. These other structures may be MnDOT property such as bridge abutments or other roadside features within or near the project area or structures on non-MnDOT property located adjacent to the project area.

Removal of entire bridge substructure units and pilings that are located within a body of water would cause disturbance to the environment. To lessen impacts to the environment, removal of these structures will be limited to that portion from the top of the structure to a depth two feet below the established bottom of the water body.

Instead of removing concrete structures beneath or adjacent to highway pavement on construction projects, the structures can be left in-place if any of the following prescribed conditions applies:

- Removal of the structure would likely produce an area of uneven settlement. Leaving the structure in-place meets an engineering need to support the overlying roadway.
- Removal of the structure would impair the integrity of another functioning structure.
- Removal of the structure would require shifting travel lanes, which would create a safety issue for motorists and workers.
- Removal of the structure would require establishing an undesirable detour route in locations where suitable alternate routes are not available.
- Structures whose existences were not known before construction commenced and were discovered during construction activities.
- Pilings located within the roadbed may remain in-place if they are removed 4 feet below the subgrade elevation.

Note: MnDOT Functional Areas must be provided an opportunity to comment on locations where concrete structures are proposed to be left in-place to ensure that the structures will not interfere with

future operations or the environment. See the “Concrete Management on MnDOT Projects” flowchart for list of Functional Groups.

Examples of concrete structures that may be left in-place beneath or adjacent to active roadways include:

- Culverts, storm sewers and associated appurtenances
- Partial foundations in the right of way
- Bridge pilings
- Cattle passes
- Structural footings

MPCA concurs with MnDOT that allowing these structures to remain in-place on active highway construction projects is allowable from engineering, and motorist and worker safety perspectives. Leaving these structures in-place does not require submitting the MPCA “Uncontaminated Concrete Disposal Permit” process under these conditions. The appropriate time to remove the structures would be on future construction projects that would not compromise the engineering integrity of the roadway or other structures and only when the removal can be conducted in a manner safe for motorists and workers.

If a roadway becomes abandoned in the future, these structures will be removed, or, if proposed to be left in-place, the MPCA permit process must be followed.