

Construction Specification 411—Removal of Water

1. Scope

The work consists of the removal of surface water and ground water as necessary to perform construction required by the contract and in accordance with the specifications. It shall include: (1) constructing, installing, building and maintaining all necessary temporary water containment facilities, channels and diversions; (2) furnishing, installing and operating all necessary pumps, piping and other facilities and equipment; and (3) removing all such temporary works and equipment after their intended function is no longer required.

2. Diverting surface water

The contractor shall install, maintain, and operate all cofferdams, channels, flumes, sumps, and all other temporary diversion and protective works needed to divert streamflow and other surface water through or around the construction site. Control of surface water shall be continuous during the period that damage to construction work could occur. Unless otherwise specified and/or approved, the diversion outlet shall be into the same drainageway that the water would have reached before being diverted.

The contractor shall furnish the NRCS engineer, in writing, a proposed plan for diverting surface water before beginning any construction activities for which a diversion is required, unless waived in Section 7 of this specification or as noted on the design. Acceptance of this plan or the waiving of the plan requirement will not relieve the contractor of the responsibilities related to this activity during the process of completing the work as specified.

3. Dewatering the construction site

Foundations, cutoff trenches, and all other parts of the construction site shall be dewatered and kept free of standing water and muddy conditions as necessary for the proper execution of the work. The contractor shall furnish, install, operate, and maintain all drains, sumps, pumps, casings, well points, and all other equipment required to properly dewater the site as specified. Dewatering systems that cause a loss of soil fines from the foundation areas will not be permitted.

The contractor shall furnish the NRCS engineer, in writing, a proposed plan for dewatering before commencing with any construction activity for which dewatering may be required, unless waived in Section 7 of this specification or as noted on the design. Acceptance of this plan or the waiving of the plan requirement will not relieve the contractor of the responsibilities for completing the specified work.

4. Dewatering for stream work

Any work that is conducted near or adjacent to streams and rivers must be conducted in a way that prevents sediment or other pollutants from entering the water body. A written sedimentation and dewatering plan shall be provided to NRCS before starting construction. Work must be conducted during periods of low water and when no significant rainfall is predicted and according to requirements from other state or federal agencies. No water may flow through active work areas. Any water that is pumped from the work area and contains sediment shall be discharged into an approved sediment basin or filtering device.

5. Dewatering borrow areas

The contractor shall maintain all borrow areas free of surface water or otherwise provide for timely and effective removal of surface and subsurface water that accumulates within the borrow area, unless waived in Section 7 of this specification or as noted on the design. Borrow material shall be processed as necessary to achieve proper and uniform moisture content at the time of placement.

If pumping to dewater borrow areas is included as a bid item of work in the bid schedule, each pump discharge pipe shall be equipped with a water meter. The meter shall be such that the measured quantity of water is accurate within 3 percent of the true quantity. The contractor shall provide necessary support to perform accuracy tests of the water meter when requested by the contracting officer.

5. Erosion and pollution control

Removal of water from the construction site, including the borrow areas, shall be accomplished so that erosion and the transporting of sediment and other pollutants are minimized. Dewatering activities shall be accomplished in a manner that the water table water quality is not altered. Pollution control activities shall not conflict with the requirements of Construction Specification 405, Pollution Control.

6. Removal of temporary works

When temporary works are no longer needed, the contractor shall remove and return the area to a condition similar to that which existed before construction. Areas where temporary works were located shall be graded for slight appearance with no obstruction to natural surface waterflows or the proper functioning and access to the works of improvement installed. The contractor shall exercise extreme care during the removal stages to minimize the loss of soil sediment and debris that was trapped during construction.

Pipes, casings, and any other material used to dewater the site shall be removed from temporary wells. The wells shall be filled to ground level with clean gravel or other suitable material approved by the NRCS. The contractor shall exercise extreme care to prevent pollution of the ground water by these actions.

7. Specific details