

Designer Note: Insert into any contracts with cast-in-place concrete that may require pumping such as: superstructure, piers, abutments, box culverts, headwalls, metal shell piles, concrete in inaccessible locations, etc.

PCC PLACEMENT BY PUMP REQUIREMENTS

Effective: January 1, 2022

These provisions are required for concrete structures and drilled shaft construction.

Revise the 7th paragraph of Article 503.07 to read:

"When air entrained concrete is pumped, a reduction hose at point of placement will be utilized. In addition, the pump shall be operated with sufficient minimum pressure and flow rate to create a steady stream of material at the point of placement. The maximum allowable air loss caused by the pumping operation shall be 3.0 percent with the minimum air content at the point of discharge meeting the requirements of Article 1020.04. The initial air test utilized to determine the air content correction factor shall not be conducted within the confines of the pour. A pneumatic or mechanical shut-off device shall be incorporated in the pump apparatus as close as practical to point of placement; the device shall be utilized to maintain a full surcharge of material in the pump during pump stoppage."

Revise the 4th paragraph of Article 503.08 to read:

"At the Contractor's option, pumping equipment may be used in lieu of a tremie to deposit concrete underwater. The Engineer will approve the concrete pumping equipment and its piping before the work is started. If pumping equipment is used to deliver concrete to a tremie and hopper, a reduction hose at point of placement will be utilized. In addition, the pump shall be operated with sufficient minimum pressure and flow rate to create a steady stream of material at the point of placement. The maximum allowable air loss caused by the pumping operation shall be 3.0 percent with the minimum air content at the point of discharge meeting the requirements of Article 1020.04. The initial air test utilized to determine the air content correction factor shall not be conducted within the confines of the pour. A pneumatic or mechanical shut-off device shall be incorporated in the pump apparatus as close as practical to point of placement; the device shall be utilized to maintain a full surcharge of material in the pump during pump stoppage."