

3. Inserts

Where pipes, castings, or conduits are to pass through concrete walls, the Contractor shall place such pipes or castings in the forms being poured in the concrete, or in special cases, with the express consent and approval of the District Engineer, shall build approved boxes in the forms to make openings for subsequent insertion of such pipes, castings, or conduits. To withstand water pressure and to insure watertightness around openings so formed, the boxes or cores shall be provided with continuous keyways with waterstops all around, and they shall have a slight flare to facilitate grouting and the escape of entrained air during grouting.

Additional reinforcement shall be provided around such openings, if large, to meet the approval of the District Engineer. The pipes, castings, or conduits as specified shall be grouted in place by pouring in grout under a head at least 4 inches. The grout shall be poured and rammed or joggled into place to completely fill the space between the pipes, castings, or conduits, and the sides of the openings, so as to obtain the same watertightness as the wall itself. The grouting materials so placed shall be surfaced when the forms are removed to give a uniform appearance to the wall if such wall will be exposed to view.

The Contractor shall accurately set and hold in exact position the forms until the concrete is poured, and set all thimbles, special castings, or other metal parts that are embedded in the concrete. He shall furnish and accurately set all inserts and anchors or other bolts necessary for the attaching of piping, valves and equipment.

4. Depositing Concrete

Concrete shall not be placed until the forms and reinforcements have been approved by the District Engineer.

5. Curing

Unformed concrete surfaces shall be covered with wet burlap mats as soon as the concrete has set sufficiently and shall thereafter be kept wet under burlap until backfilled or for 14 days after the concrete is placed. Formed surfaces, both interior and exterior, shall be similarly water-cured under burlap mats or by water sprays beginning as soon as the forms are stripped. At the option of the Contractor, concrete surfaces may be cured by the curing-compound method as defined below. Where wooden forms are used they shall be wetted immediately after the concrete has been placed and shall be kept moist until removed, or they may be treated with an approved form sealer before pouring.

Concrete curing compounds, if their use is permitted by the District Engineer, shall be of a nature and composition not deleterious to concrete. The curing compound shall be of a standard and uniform quality ready for use as shipped by the manufacturer. At the time of use, the curing compound shall be in a thoroughly stirred condition. Curing compound shall not be diluted by the addition of solvent or thinners or be altered in any manner without the specific approval and in a manner prescribed by the manufacturer.