**PILE DETAILS**

**CLASS 90 AND CLASS 140**

- **Notes:**
  1. Details are the same for both Class 90 and Class 140 piles unless noted otherwise.
  2. All reinforcing bars shall be furnished in the lengths specified on the Project Plans and shall be hooked at the top of the pile as indicated.
  3. Reinforcing bars shall be of one or more bars of the same or different sizes placed in a single bundle as indicated.
  4. Lapped splices shall be at least the diameter minimum. Splices shall be aligned and spaced as required to provide continuity of reinforcement, and splices shall be terminated by a 135° hook with 6" tail hooked around a longitudinal bar or strand.
  5. Clearance to spiral reinforcement shall be maintained if used as required to provide continuity of reinforcement, and splices shall be terminated by a 135° hook with 6" tail hooked around a longitudinal bar or strand.
  6. For longitudinal reinforcement and prestressing for anchor piles and load test piles, see "Load Test Pile Details (2)", Standard Plan B2-10.
  7. Alternative "Y" piles shall not be used for corrosive environments.

**Concrete Pile Design Notes:**

- **Concrete Strength:**
  - Class 90:
    - Minimum tensile strength: 66,000 psi
    - Compressive strength: 6,000 psi (Alternative "X")
    - 5,000 psi (Alternative "Y")
  - Class 140:
    - Minimum tensile strength: 60,000 psi
    - Compressive strength: 4,000 psi (Alternative "X")
    - 5,000 psi (Alternative "Y")

**Steel Pipe Pile Design Notes:**

- **Steel Pipe Pile Design Notes:**
  - Steel pipe piles shall be provided with a minimum tensile strength of 60,000 psi and a compressive strength of 4,000 psi (Alternative "X") or 5,000 psi (Alternative "Y").

**Alternative Pile Anchor for Prestressed Piles**

- **Design Capacity:**
  - Class 90:
    - Compression = 90 kip (Service state)
    - Tension = 90 kip (Nominal axial structural resistance)
  - Class 140:
    - Compression = 140 kip (Service state)
    - Tension = 140 kip (Nominal axial structural resistance)

**Pile Embedment**

- **Required Nominal Resistance (Tension):**
  - Class 90:
    - 60 kips or less: 4" bars
    - Greater than 60 kips: 4" bars
  - Class 140:
    - 60 kips or less: 6" bars
    - Greater than 60 kips: 6" bars

*See Pile Data Table in the Project Plans for Nominal Resistance (Tension) Requirements*