

Cement Producer's Up Front Responsibilities

The cement producer/production facility must be included on the listing of MDOT Approved Manufacturers for Portland Cement.

Prior to consideration for Type IL substitution, the cement manufacturer must submit current monthly mill test reports for the Type IL Portland cement documenting conformance with the chemical and physical requirements specified in ASTM C595. In addition, the cement manufacturer must provide laboratory test data for both fresh and hardened concrete properties (specified below) for a laboratory concrete mixture produced using Type IL Portland cement and for that of a comparable concrete mixture using Type I Portland cement. Materials and mixture proportions must be the same for both laboratory mixes. Minor adjustments to chemical admixture dosages are permitted in efforts to achieve the specified fresh concrete properties.

- Fresh concrete properties
 - o Slump with a fixed w/c ratio,
 - o Air content of fresh concrete, and
 - o Concrete initial set, minutes,
 - o Unit Weight (density)
- Hardened concrete properties
 - o 1-day compressive strength,
 - o 7-day compressive strength, and
 - o 28-day compressive strength

The Materials Engineer at the Construction Field Services (CFS) Division will review the cement manufacturer's laboratory test data. If the Type IL Portland cement concrete mixture is shown to produce comparable laboratory test results to that of the concrete mixture using Type I Portland cement, the Approved Manufacturer of the Portland cement will be permitted to substitute their Type IL in lieu of their Type I Portland cement for the project.

CFS approval of the cement producer's substitution of Type IL cement in lieu of Type I for current and new projects where the contract documents specify Type I Portland cement will be as follows:

1. The CFS Materials Engineer has reviewed the cement manufacturer's monthly mill test reports, described above, and has determined that the Type IL Portland cement is in conformance with the chemical and physical requirements specified in ASTM C595.
2. The CFS Materials Engineer has reviewed the cement manufacturer's laboratory test data, described above, and has determined that the Type IL Portland cement is shown to produce laboratory test results similar to those of a comparable laboratory concrete mixture using Type I Portland cement.

The Contractor/Concrete Producer's responsibilities at the project level will be as specified in the *Special Provision for Portland Cement (Type IL)*.