Department Memorandum

Idaho Transportation Department

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Program Number(s)

- TO:Contractors and Cement Suppliers of HighwaysKey Number(s)ProjectsDanaDigitally signed<br/>by Dana DietzProgram ID, County, Etc.
- Structural Materials Engineer Dietz

RE: Transition from ordinary portland cement to Type IL cement

Dear Contractor,

As many of you are aware, availability of cement is becoming more and more limited. As a result, many cement suppliers are transitioning to Type IL cement from ordinary portland cement (opc). This memo is to provide consistent direction to our industry partners and the Department for how to properly make this transition without increasing risk to the Department and concurrently minimizing costs to the suppliers.

Instead of having the supplier re-test all of their mix designs with Type IL, the Department will allow the supplier to choose 3 commonly used mix designs, perform a side by side comparison with opc and the IL cement and see if there is a standard adjustment that can be applied based on consistent adjustments between the 3 mix designs.

For a minimum of 3 commonly used mix designs, batch up one with the opc (e.g., I/II) from the original mix design and one with Type IL.

- Test each one for air content, strength, etc.
- Determine what changes are required based on the results of these tests to achieve an equivalent product with IL as there was for ordinary portland cement:
  - o water content
  - $\circ$  cementitious content
  - o admixture dosage
  - aggregate weight
  - o include any others required changes not mentioned here
- If the changes required are consistent across the board for these 3 mix designs, the Department will accept that these same modifications will be allowable for all mix designs using the same Type IL cement without running additional tests;
- The Contractor is still required to meet minimum strength requirements.
- It is assumed that ASR results will not change significantly as a result of this transition to IL, therefore, additional ASR testing is not required.

Example: Let's assume that each mix design now requires 10% more IL than opc, this can be applied to all mix designs, rather than having to test each one independently. Other mix design parameters must also be adjusted accordingly to achieve 1 cubic yard volume.