Department of Transportation

State of Georgia

Special Provision

Section 500—Concrete Structures

Add the following to 500.1.03.A:

The Contractor is responsible for all concrete mix designs. Submit a mix design for approval to the Office of Materials and Research. Include the sources, actual quantity of each ingredient, design slump, design air and laboratory results that demonstrate the ability of the design to attain the required compressive strength at 28 days.

Prepare and test at least 8 cylinders according to ASTM C192 and AASHTO T22 to ensure that the demonstrated laboratory compressive strength at 28 days exceeds the minimum acceptance strength (X). Make the specimens from two or more separate batches with an equal number of cylinders made from each batch. The minimum acceptance strength is:

$$X = f'c + 500 \text{ psi } (X = f'c + 3.4 \text{ MPa})$$

Where, f'c is the required minimum compressive strength at 28 days for Class D concrete as shown in Table 1–Concrete Mix Table.

Add the following to Table 1—Concrete Mix Table:

Table 1—Concrete Mix Table

English								
Class of Concrete	**(2) Coarse Aggregate Size No.**	**(1 & 6) Minimum Cement Factor lbs/yd^3**	**Max Water/ Cement Ratio lbs/lbs**	**(5) Slump Acceptance Limits (in) Lower - Upper**		**(3 & 7) Entrained Air Acceptance Limits (%) Lower - Upper**		**Minimum Compressive Strength at 28 days (psi)**
Class D	**57,67**	**650**	**0.445**	**2**	**4**	**3.5**	**7.0**	**4000**
Metric								
Class of Concrete	**(2) Coarse Aggregate Size No.**	**(1 & 6) Minimum Cement Factor kg/m^3**	**Max Water/ Cement Ratio kg/kg**	**(5) Slump Acceptance Limits (mm) Lower - Upper**		**(3 & 7) Entrained Air Acceptance Limits (%) Lower - Upper**		**Minimum Compressive Strength at 28 days (MPa)**
Class D	**57,67**	**386**	**0.445**	**50**	**100**	**3.5**	**7.0**	**28**

Delete Subsection 500.3.04.F.1.b and add the following:

b. Class AA—Bridge substructure concrete or precast concrete as called for on the Plans

Add the following to Subsection 500.3.04.F.1:

f. Class D—Bridge superstructure concrete or as called for on the Plans