February 3, 2011

# REVISION OF SECTION 620

FIELD LABORATORIES WITH FORCED AIR CONVECTION OVEN

## NOTICE

This is a standard special provision that revises or modifies CDOT’s *Standard Specifications for Road and Bridge Construction*. It has gone through a formal review and approval process and has been issued by CDOT’s Project Development Branch with formal instructions regarding its use on CDOT construction projects. It is to be used as written without change. Do not use modified versions of this special provision on CDOT construction projects, and do not use this special provision on CDOT projects in a manner other than that specified in the instructions unless such use is first approved by the Standards and Specifications Unit of the Project Development Branch. The instructions for use on CDOT construction projects appear below.

Other agencies that use the *Standard Specifications for Road and Bridge Construction* to administer construction projects may use this special provision as appropriate and at their own risk.

**Instructions for use on CDOT construction projects:**

Use this standard special provision on projects which reference the 2006 M & S Standard Plans, which have 5000 or more tons of HMA and require a field lab with a forced air convection oven to be furnished by the Contractor.

Section 620 of the Standard Specifications is hereby revised for this project as follows:

Subsection 620.03 shall include the following:

In Standard Plans M-620-1 and M-620-2, replace the range with the following:

 **Forced air convection oven**: the oven shall be rated to at least 1500 watts including:

1. At least one blower to circulate air inside without disturbing fine grained soils placed in the oven.

2. A minimum interior capacity of 4.8 cubic feet.

3. An exhaust chamber adapter to connect to a 3 inch pipe which shall be vented to the outside.

4. At least two adjustable shelves.

5. An over-temperature protection device.

6. An electronic control system with digital temperature read-out and digital temperature set points to precisely read and set the oven temperature.

The oven shall have a temperature range from 104 °F to 464 °F and have a uniform temperature of ± 3 °F at 230 °F.

The oven shall be capable of maintaining a constant temperature, ± 5 °F, throughout its temperature range.

The oven heating elements shall not be allowed to operate without the blower.

The field laboratory shall be equipped with a separate electrical circuit to supply power to the forced convection oven.

In addition to the above forced air convection oven, a hot plate conforming to the following shall be provided:

1. Two burner, portable, electrical "Cal-rod" or "Rangette" type.

2. At least one burner shall be rated a minimum of 800 watts.

3. Each hot plate shall be equipped with an on-off indicator light.