

**ITEM 15502.0402 M - CEMENT CONCRETE PAVEMENT, REINFORCED,  
CLASS C                    PROFILOGRAPHED**

**ITEM 15502.0602 M - CEMENT CONCRETE PAVEMENT, UNREINFORCED,  
CLASS C                    PROFILOGRAPHED**

**DESCRIPTION**

The requirements of Section 502, Portland Cement Concrete Pavement, shall apply for all cement concrete pavement work in this contract, except those requirements which are here-in-after designated for mainline pavement. Mainline pavement shall be as designated in the schedule shown on the plans. Cement concrete pavement for ramps, acceleration and deceleration lanes, shoulders, approach slabs and bridge decks are not considered mainline pavement.

**MAINLINE PAVEMENT REQUIREMENTS**

**CONSTRUCTION**

Under Subsection 502-3.02C, Fixed Form Paving, delete the last paragraph beginning with "The finishing machine.....," and ending with "..... last screed." Add a new paragraph "D. Profilograph. The profilograph shall conform to the requirements of Item 15502.04 M - PROFILOGRAPH."

The requirements of Subsection 502-3.09C, Testing the Surface are deleted for mainline pavement for straight edge positions parallel to the centerline of the pavement. Any testing of the plastic concrete pavement surface to control surface smoothness parallel to the pavement centerline shall be the responsibility of the Contractor.

The requirements of Subsection 502-3.13 Surface Test, are deleted for mainline pavement for straight edge positions parallel to the centerline of the pavement. The following requirements are to be added:

In accordance with written Department instruction, after the concrete has hardened sufficiently, the Engineer shall test the pavement surface in the wheelpaths with a California Type profilograph and develop a Profile Trace. The wheel paths mentioned herein will be considered to be longitudinal lines located parallel to the centerline of the pavement and approximately 1 meter measured transversely, inside all lane edges.

All objects on the surface of the pavement, including curing covers if used, shall be removed by the Contractor prior to the profilograph measurements. Curing covers, if used, shall be properly replaced by the Contractor after the measurements are taken. Necessary traffic control and survey stationing for initial measurements or any subsequent measurements shall also be provided by the Contractor.

The Profile Trace will be converted to a Preliminary Profile Index and a Listing of Bumps in accordance with written Department instructions. The Profile Index is a measure of surface smoothness. It is determined by summing the vertical deviations outside a 5 millimeter blanking band, as indicated on the Profile Trace. The units of this measure are millimeters per kilometer.

Bumps are high points on the Profile Trace and correspond to high points or bumps on the pavement surface. They are determined by locating vertical deviations outside a 10 millimeter maximum for a 7.5 meter span, as indicated on the Profile Trace.

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The Preliminary Profile Index, bump locations, and the Profile Trace shall be made available to the Contractor for his review as soon as practicable after measurements are taken. The intent of this procedure is to inform the Contractor of the pavement surface characteristics for information only. The contractor may utilize this information for action during subsequent paving operations if necessary.

DISAPPROVED PER E1 02-003  
Any bumps exceeding a vertical height of 10 millimeters in a 7.5 meter span as indicated on the Profile Trace shall be satisfactorily corrected by grinding or by pavement removal and replacement at the option of the contractor. The bumps shall be considered satisfactory when a check measurement by the profilograph shows that the bumps are 10 millimeters or less. Grinding shall be performed with equipment specifically designed as bump cutters. The texture produced by grinding may be either longitudinal or transverse to the pavement centerline. The texture in the ground areas shall be similar to that of the adjacent pavement sections.

After any bumps have been corrected and retested with the profilograph, the Final Daily Profile Index shall be determined for each day's paving. A day's paving is defined as the actual full width pavement placed in a single pass in a single day, provided that it is at least 300 linear meters. If less than 300 linear meters is paved, that day's production shall be grouped with the subsequent day's production.

No Final Daily Profile Index shall exceed 270 millimeters per kilometer. Should any Final Daily Profile Index exceed this maximum, the contractor shall correct, at his expense, any portion of the pavement such that the Final Daily Profile Index shall be reduced to 270 millimeters per kilometer or less. Any bumps exceeding 10 millimeters in the corrected sections shall be removed in accordance with the provisions of this specification. A Final Daily Profile Index shall then be remeasured and recorded.

**BASIS OF PAYMENT**

The unit price bid per cubic meter shall include all labor, materials and equipment necessary to complete the work except for the profilograph, transverse joint supports, longitudinal joint ties, metal reinforcement and constructing and sealing joints, which shall be paid for under their respective items.

An initial payment will be made after the cement concrete pavement has been placed, the Preliminary Daily Profile Index taken and results obtained, and pavement properly cured. Payment will be made, at the unit bid price per cubic meter, based on the schedule shown below.

Final payment will be based on the Final Daily Profile Index in accordance with the schedule shown below.

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DAILY PROFILE INDEX	PERCENT OF QUANTITY TO BE PAID
0 - 30.0	105
30.1 - 60.0	104
60.1 - 90.0	103
90.1 - 120.0	102
120.1 - 150.0	101
150.1 - 165.0	100
165.1 - 180.0	98
180.1 - 195.0	96
195.1 - 210.0	94
210.1 - 225.0	92
225.1 - 240.0	90
240.1 - 255.0	88
255.1 - 270.0	86
Over 270.0	Corrective Action Required