ERRATA SHEET FOR STANDARD SPECIFICATION BOOK FOR STATE ROAD AND BRIDGE CONSTRUCTION, METRIC VERSION, 1990 EDITION

SECTION 101
DEFINITIONS AND TERMS

Page 15, add the following subsection:

101.79 Daylight Hours. Daylight hours for the purpose of these specifications is defined as the period one-half hour after sunrise to one-half hour before sunset.

SECTION 108
PROSECUTION AND PROGRESS

Page 75, subsection 108.07(a)(2). Delete this paragraph and replace with the following:

(2) Performance of work on Saturdays is optional with the Contractor. If the Contractor elects to work on Saturdays and inspection is required for such work, even on a non-controlling item of work, then a working day will be assessed as per subsection 108.07(a)(1), above. In such case, the Contractor shall provide the Engineer 24-hours advance notice of his intention to work on Saturday.

SECTION 109
MEASUREMENT AND PAYMENT

Page 90.subsection 109.06(a). Paragraph Six - Delete this paragraph in its entirety and replace with the following:

Receipted bills for all invoiced material payments allowed on the estimate must be submitted to the Field Engineer within 60 days of the date of the estimate on which the material allowance was made, or such material allowance will be deducted from future payments.

DIVISION 150
EQUIPMENT

Page 98,99,and 100, subsections 151.03(h)&(j) (including TABLES 1 & 2). Change "K.P.H." to "km/hr".

Page 120, subsection 151.21(c)(1.6). Delete the second paragraph of this subsection and replace with the following:

When using a baghouse, collected fines shall be returned to the mix in a continuous uniform flow in a manner approved by the Engineer.

The cycling rate of the baghouse shall be controlled so that the pressure differential is maintained at a relatively constant rate within the range recommended by the manufacturer.

The pressure differential gauge shall be equipped with a device which will detect an increase or decrease in pressure from the manufacturers recommendation and actuate a visual and/or audible signal at a location or locations approved by the Engineer.

Page 121, subsection 151.21(c)(2.2). Next to last sentence, change "certified" to "calibrated".

Page 134, subsection 151.30(g). Delete third sentence and replace with the following:

Except for gravity hammers all wood, wire rope and asbestos hammer cushions are specifically disallowed and shall not be used.

Section 209
Embankments

Page 176, subsection 209.03. Paragraph Six - Delete last sentence of this paragraph and replace with the following:

Payment for the embankment used for the backfill in these areas shall be made at the rate of two times the contract unit price per cubic meter for embankment.

SECTION 213
SHOULDERS

Page 192, subsection 213.02(b)(3). Delete this subsection.

SECTION 310
FLY ASH MODIFIED SUBGRADE

Page 237, subsection 310.03(a). Third sentence - change "214 newtons" to "214 kilonewtons".

SECTION 402
CLASSIFICATION AND PROPORTIONING

Page 248, subsection 402.03(c)TABLE 1. Change the unit "mPa" to "Mpa".

SECTION 502
PORTLAND CEMENT CONCRETE PAVEMENT

Page 270, subsection 502.03(c). Paragraph Three - Last sentence, change "property" to "properly".

Page 280, subsection 502.03(h)(8.6). Next to last sentence, change "soal" to "soap".

Page 284, subsection 502.03(j)(3.1.2). First sentence - change "26 megapascals" to "2.6 megapascals".

Page 284, subsection 502.03(j)(3.1.2). Add the following to this subsection:

If a minimum of 2.6 megapascals is not met on the fourth day test, the test will be repeated after the sixth day. Should the sixth day test fail to pass a minimum of 2.6 megapascals, no further flexure strength tests will be required and traffic will not be allowed on this section until after the tenth day unless approved otherwise by the Engineer.

Page 285, subsection 502.03(k). Paragraph six - Delete the third sentence of this paragraph and replace with the following:

One core will be taken at random locations, as determined by the Engineer, from each unit.

Paragraph seven - Delete the first sentence of this paragraph and replace with the following:

For all pavement which is less than three meters in width and consisting of at least 420 square meters, and for other irregular areas of at least 420 square meters, one core will be taken at random locations, as determined by the Engineer, from each unit.

Paragraph nine - Delete this paragraph in its entirety and replace with the following:

When the measurement of the first core from any unit is not deficient more than five millimeters from the Plan thickness, full payment will be made. When the measurement of the first core from any unit is deficient more than five millimeters from Plan thickness, two additional cores within the 300 meter unit will be taken at intervals of not less than 90 meters, or two additional cores within the 840 square meter unit will be taken at locations such that the pavement will be well represented. The average thickness of the unit will be determined by using the measurements of the three cores taken in that unit. In calculating the average thickness of the pavement,

measurements which are in excess of the specified thickness by more than five millimeters will be considered as the specified thickness plus five millimeters, and measurements which are less than the specified thickness by more than 25 millimeters will be considered as the specified thickness minus 25 millimeters. If the average thickness of the cores is not deficient more than five millimeters from Plan thickness, full payment will be made. If the average thickness of the three cores is deficient more than five millimeter from Plan thickness, an adjusted unit price as provided in these specifications will be paid for the unit represented.

A 50 millimeter diameter core may be used for thickness measurements; however, every fourth core shall be a minimum of 100 millimeter diameter for the purpose of determining compressive strength.

Page 288, subsection 502.04(a). Last sentence of the last paragraph - change "two meters" to "three meters".

Page 293, subsection 502.07(f). Delete the last paragraph of this subsection.

SECTION 604
HOT RECYCLED BITUMINOUS CONSTRUCTION

Page 326, subsection 604.09(d). Change the referenced subsection "604.04(b)" to "603.04(b)".

SECTION 605
PLANT MIX BITUMINOUS CONSTRUCTION - COMMERCIAL GRADE

Page 329, subsection 605.06, Method of Measurement. Change the subsection number to 605.07.

Page 329, subsection 605.07, Basis of Payment. Change the subsection number to 605.08.

SECTION 702
STRUCTURAL STEEL CONSTRUCTION

Page 395, subsection 702.05(d). Second paragraph - change "175 mm metric conversion sheet millimeters" to "175 millimeters". Third paragraph - change "225 mm metric conversion sheet millimeters" to "225 millimeters".

SECTION 704
PILING

Page 434, subsection 704.04(d), TABLE 1. Delete TABLE 1 and replace with the following:

TABLE 1

HAMMER	TYPE OF PILE	FORMULA
Gravity	Timber	$P=\frac{1635WH}{(S+25)}$
Gravity	Steel Shell Steel Sheet	$P=\frac{2450WH}{(S+9)}\left[\frac{W}{W+X}\right]$
Steam (Single Action)	All Types	$P=\frac{1635WH}{(S+3)}$
Steam (Double Action)	All Types	$P=\frac{166.7E}{(S=3)}$
Delmag and McKierman-Terry*	All Types	$P=\frac{1635WH(0.80)}{\left\{S+2.5\left[\frac{X}{W}\right]\right\}}$ **
Link Belt *	All Types	$P=\frac{166.7E(0.80)}{\left\{S+2.5\left[\frac{X}{W}\right]\right\}}$ **

Page 441, subsection 409.09(c). In the first sentence, change "...ten times the Contract unit price per meter ..." to "...3.3 times the Contract unit price per meter ...". In the second sentence, change "... four times the Contract unit price per meter ..." to "... 1.3 times the Contract unit price per meter...".

SECTION 705
PRESTRESSED CONCRETE MEMBERS

Page 444, subsection 705.02(a). TABLE 2 - change the designation "mPa" to "MPa".

SECTION 729
COAL-TAR MEMBRANE PROTECTIVE COAT

Page 526, subsection 729.03(b). Third paragraph, second sentence - change "800 to 900 milliliters" to "800 to 900 milliliters per square meter".

SECTION 801
ELECTRIC LIGHTING AND TRAFFIC SIGNALS

Page 537, subsection 801.04(i)&(k). Change "4.1 millimeters diameter" to "No. 6 A.W.G."

SECTION 804
ROCK EMBANKMENT

Page 547, subsection 804.03. Delete the fourth sentence and replace with the following:

The finished embankment shall be free from objectionable pockets of small rocks and clusters of large rocks.

SECTION 812
PAVEMENT PATCHING

Page 594, subsection 812.03(c)(3). Change the second sentence to read as follows:
A minimum of 445 kg of either Type I or Type II cement per cubic meter of concrete will be used.

Page 595, subsection 812.03(c)(4). Change the second sentence to read as follows:
A minimum of 390 kg of Type III cement per cubic meter of concrete will be used.

SECTION 902
FURNISHING AND PLANTING PLANT MATERIALS

Page 688, subsection 902.03(j). Change the "3.75 mm diameter" guy wire to "No. 9 gauge".

SECTION 908
MULCHING, SLOPE PROTECTION AND EROSION CONTROL

Page 709, subsection 908.03(a). In the chart at the top of this page - change "0.4 to 0.5" to "4 to 5".

SUBSECTION 1102
AGGREGATES FOR CONCRETE

Page 732, subsection 1102.02(b). Add the following to this subsection:

(1.1.4) Mortar Strength. The above requirements for soundness and wear do not apply to materials for use in total mixed aggregate if they have less than 10% retained on the 2.36 mm sieve.

Sand-gravel or sand which is used in total mixed aggregate and tested for soundness and wear shall have that portion of the total mixed aggregate passing the 9.5 mm sieve subjected to the mortar strength test. The test shall be performed with high early strength cement in the place of the standard cement, and shall have compressive strength results at the age of 24 and 72 hours of not less than 100% of that developed by mortar of the same proportions and consistency made of the same cement and Standard (20-30) Ottawa Sand.

Page 734, subsection 1102.02(b)(2.1). Second paragraph, first sentence - change "1.18 mm sieve" to "2.36 mm sieve".

SECTION 1103
AGGREGATES FOR BITUMINOUS MIXTURES

Page 743, subsection 1103.02(a). TABLE 5 - in the table heading, change "125 mm" to "12.5 mm".

SUBSECTION 1105
AGGREGATES FOR AGGREGATE BASE CONSTRUCTION

Page 758, subsection 1105.02(b)(3). Delete this subsection and replace with the following:

(3) Absorption, maximum (AB-1 only) (by KT-6 Proc. 1) 4%

SUBSECTION 1108
AGGREGATES FOR UNDERDRAIN AND OTHER PERMEABLE BACKFILL

Page 765, subsection 1108.02(a). Delete this subsection and replace with the following:

(a) Composition.

Aggregate for use as Type BD-1 and Type UD-1 shall be of the following types unless designated otherwise on the Plans; crushed porphyry, crushed sandstone, gravel, crushed gravel or chat obtained from the mining of zinc and lead ores. If a crushed aggregate is specified and the Contractor elects to furnish crushed gravel, it shall be produced from gravel having 90-100% retained on the 37.5 mm sieve before crushing.

SUBSECTION 1109
AGGREGATES FOR COVER MATERIAL

Page 768, subsection 1109.02(b)(3). Delete this subsection and replace with the following:

(3) Absorption, maximum (all types except CM-L)
(by KT-6 Proc. 1) 4%

SUBSECTION 1116
STONE FOR RIPRAP, WASH CHECKS, DITCH LINING, AND OTHER MISCELLANEOUS USES

Page 785, subsection 1116.02(a). TABLE 11 - in the table heading, change "7.3 MT" to "7.25 MT", "3.5 MT to 3.75 MT", and "2 MT" to "1.75 MT".

Page 787, subsection 1116.02(c)TABLE 12a. Change the Sieve Requirements from " 3" and 1½" " to " 75 mm and 37.5 mm".

Page 788, subsection 1116.02(d)(2.1)&(2.4). Delete these subsections and replace with the following:

(2.1) Specific Gravity, sat. and surf. dry, minimum
(by KT-6 Proc. 1) 2.40

(2.4) Absorption, maximum (by KT-6 Proc. 1) 6.0%

SUBSECTION 1201
ASPHALT CEMENT AND CUTBACK CEMENT

Page 807, TABLE 1. On the line for "Flash Point (TOC) ^{o}C, RC-3000" - change the value of "80" to "27".

Pages 807 and 808, TABLE 1 and TABLE 2. On the line for "Vacuum viscosity at 60°C" - change the unit of "poises" to "pascal second".

Page 809, TABLE 3. In the heading - change "140°F" to "60°C". On the line for "Viscosity, 60°C, Pa·s" - change "400" to "40", "600" to "60", "800" to "80", "1200" to "120", "1600" to "160", "2400" to "240", and "3600" to "360".

SUBSECTION 1203
HOT RECYCLING AGENTS

Page 815, TABLE 6. In the "Type and Grade" column - change "Thin-film oven test at 325°F" to "Thin-film oven test at 163°C".

SECTION 1300
BRICK AND CONCRETE MASONRY UNITS

Page 829. Change the reference number in the lower portion of the page from "1301" to "1302".

Page 830. Change the reference number in the lower portion of the page from "1301" to "1303".

SECTION 1400
CONCRETE ADMIXTURES AND CURING MATERIALS

Pages 834, 835, and 836. Change the reference number in the lower portion of the page from "1401" to "1402".

Page 837 and 838. Change the reference number in the lower portion of the page from "1401" to "1403".

Page 839. Change the reference number in the lower portion of the page from "1401" to "1404".

Page 840. Change the reference number in the lower portion of the page from "1401" to "1405".

Page 841. Change the reference number in the lower portion of the page from "1401" to "1406".

SECTION 1500
JOINT SEALING AND JOINT FILLER MATERIALS

Delete the reference number in the lower portion of the page.

SUBSECTION 1502
COLD TYPE JOINT SEALING COMPOUND

Page 846, subsection 1502.02(b)(1.2). Change "120 g" to "114 g".

SUBSECTION 1503
PREFORMED EXPANSION JOINT FILLER FOR CONCRETE

Pages 848 and 849. Change the reference number in the lower portion of the page from "1502" to "1503".

SUBSECTION 1505
MATERIAL FOR FILLING AND SEALING JOINTS IN PIPE

Page 855, subsection 1505.03(a). Change "250 ml gill can" to "237 mL gill can".

SECTION 1600
FERROUS AND NON-FERROUS METALS

Delete the reference number in the lower portion of the page.

SUBSECTION 1607
STEEL PILING AND PILE POINTS

Page 886, subsection 1607.02(b)(2). Last paragraph, second sentence - change "225 mm" to "-225 mm".

SUBSECTION 1625
BRIDGE PROJECT MARKERS

Page 919, subsection 1625.02(d)(1). Change "40 mm inches" to "40 mm", and "3 mm inch" to "3 mm".

SUBSECTION 1626
ALUMINUM ALLOYS

Page 923, subsection 1626.02(b)FOOTNOTE REFERENCE(C). Change "50 mm" to "5 mm".

SECTION 1700
MISCELLANEOUS MATERIALS

Delete the reference number in the lower portion of the page.

SUBSECTION 1701
BEARING PADS, MATS, AND BEARING DEVICES (TFE) STRUCTURES

Page 932, subsection 1701.02(d). Change "400 to 480 grams" to "340 to 400 grams".

Page 932, subsection 1701.02(f). Second paragraph - change "0.5 micrometers" to "0.2 micrometers".

SUBSECTION 1705
CONCRETE BONDING EPOXY

Page 940, subsection 1705.02(b)(1). Change "Initial Viscosity, poise 20 to 40" to "Initial Viscosity, pascal second 2 to 4".

SUBSECTION 1706
EPOXY RESIN FOR PRESSURE GROUTING

Page 945, subsection 1706.02(b)(2.2). Change the unit of "poises" to "pascal second", and the values from "0-10 and 20-40" to "0-1 and 2-4".

SUBSECTION 1710
GEOTEXTILE FABRIC

Page 953, subsection 1710.02(a)(3). Change "475 mm" to "425 mm".

SUBSECTION 1808
ORGANIC ZINC PRIMER FOR STRUCTURAL STEEL

Page 978, subsection 1808.03(a)(2). Change "3 mm inch" to "3 mm".

SUBSECTION 1902
CONCRETE PIPE

Page 991, subsection 1902.03(c). Change "414 MPa" to 41.4 MPa".

SUBSECTION 2004
FLY ASH FOR USE IN CONCRETE

Page 1014, subsection 2004.03(b)(1). First sentence - change "200 tons" to "200 metric tons".

SUBSECTION 2105
AGRICULTURAL LIMESTONE

Page 1032, subsection 2105.02. Delete the equation following the first paragraph and replace with the following:

E.C.C. = (A + B) x Calcium Carbonate Equivalent

SUBSECTION 2107
SODS

Page 1035, subsection 2107.02(b). Change "1.7 meters" to "1.4 meters".

SUBSECTION 2207
THERMOPLASTIC REFLECTORIZED PAVEMENT MARKING MATERIAL

Page 1066, subsection 2207.03(a)(2). Third sentence - change "100 mesh screen" to "150 mm mesh screen".

Page 1066, subsections 2207.03(a)(3.1.1)&(3.2). Change the unit "one pint" to "500 mL'.

SECTION 2500
MISCELLANEOUS METHOD OF TESTS

Page 1096, subsection (cc). Replace the word "Flag" with "Fly".

Page 1096, subsection (ff). Replace the words "by Reflux Extraction" with "by Nuclear Method".

07-25-01 C&M (DRW)