



**STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION**

**ROADWAY DESIGN DIVISION**  
SUITE 1300 JAMES K. POLK BUILDING  
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**JOHN C. SCHROER**  
COMMISSIONER

**BILL HASLAM**  
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**INSTRUCTIONAL BULLETIN NO. 15-07**

**Regarding Computations For Asphaltic Concrete Surface (Hot Mix)**

**Effective immediately**, section 4-411.00 of the Design Guidelines is revised.

**PURPOSE:** To add "TL" Surface, "TLD" Surface, and "OGFC" Surface Mix Computation Equations.

**4-411.00 COMPUTATIONS FOR ASPHALTIC CONCRETE SURFACE (HOT MIX)**

Item No. 411-01 Grading "D" Surface (Performance Grade PG64-22)

$$\frac{\text{Compacted volume (C.Y.)} \times 3,816 \text{ Lb./C.Y.}}{2,000 \text{ Lb./ Ton}} = \text{Tons} \quad \text{Item 411-01.10}$$

NOTE: 1 inch per square yard weighs 106 ± pounds

Item No. 411-01 Superpave Surface (Performance Grade PG64-22)

$$\frac{\text{Compacted volume (C.Y.)} \times 3,816 \text{ Lb./C.Y.}}{2,000 \text{ Lb./ Ton}} = \text{Tons} \quad \begin{array}{l} \times 0.06 = \text{Tons} \quad \text{Item 411-01.03} \\ \times 0.94 = \text{Tons} \quad \text{Item 411-01.04} \end{array}$$

NOTE: 1 inch per square yard weighs 106 ± pounds

Item No. 411-01 Grading "E" Surface (Performance Grade PG64-22)

$$\frac{\text{Compacted volume (C.Y.)} \times 3,870 \text{ Lb./C.Y.}}{2,000 \text{ Lb./ Ton}} = \text{Tons} \quad \text{Item 411-01.11}$$

NOTE: 1 inch per square yard weighs 107.5 ± pounds

Item No. 411-01 Grading "E" Shoulders (Performance Grade PG64-22)

$$\frac{\text{Compacted volume (C.Y.)} \times 3,708 \text{ Lb./C.Y.}}{2,000 \text{ Lb./ Ton}} = \text{Tons} \quad \text{Item 411-01.07}$$

NOTE: 1 inch per square yard weighs 103 ± pounds

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Item No. 411-02 Grading "D" Surface (Performance Grade PG70-22)

$$\frac{\text{Compacted volume (C.Y.)} \times 3,816 \text{ Lb./C.Y.}}{2,000 \text{ Lb./Ton}} = \text{Tons} \quad \text{Item 411-02.10}$$

NOTE: 1 inch per square yard weighs 106 ± pounds

Item No. 411-02 Superpave Surface (Performance Grade PG70-22)

$$\frac{\text{Compacted volume (C.Y.)} \times 3,816 \text{ Lb./C.Y.}}{2,000 \text{ Lb./Ton}} = \text{Tons} \quad \begin{array}{l} \times 0.06 = \text{Tons} \quad \text{Item 411-02.03} \\ \times 0.94 = \text{Tons} \quad \text{Item 411-02.04} \end{array}$$

NOTE: 1 inch per square yard weighs 106 ± pounds

Item No. 411-02 Grading "E" Surface (Performance Grade PG70-22)

$$\frac{\text{Compacted volume (C.Y.)} \times 3,870 \text{ Lb./C.Y.}}{2,000 \text{ Lb./Ton}} = \text{Tons} \quad \text{Item 411-02.11}$$

NOTE: 1 inch per square yard weighs 107.5 ± pounds

Item No. 411-03 Grading "D" Surface (Performance Grade PG76-22)

$$\frac{\text{Compacted volume (C.Y.)} \times 3,816 \text{ Lb./C.Y.}}{2,000 \text{ Lb./Ton}} = \text{Tons} \quad \text{Item 411-03.10}$$

NOTE: 1 inch per square yard weighs 106 ± pounds

Item No. 411-03 Superpave Surface (Performance Grade PG76-22)

$$\frac{\text{Compacted volume (C.Y.)} \times 3,816 \text{ Lb./C.Y.}}{2,000 \text{ Lb./Ton}} = \text{Tons} \quad \begin{array}{l} \times 0.06 = \text{Tons} \quad \text{Item 411-03.03} \\ \times 0.94 = \text{Tons} \quad \text{Item 411-03.04} \end{array}$$

NOTE: 1 inch per square yard weighs 106 ± pounds

Item No. 411-03 Grading "TL" Thin Lift Surface (Performance Grade PG64-22)

$$\frac{\text{Compacted volume (C.Y.)} \times 3,816 \text{ Lb./C.Y.}}{2,000 \text{ Lb./Ton}} = \text{Tons} \quad \text{Item 411-03.07}$$

NOTE: 1 inch per square yard weighs 106 ± pounds

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Item No. 411-03 Grading "TL" Thin Lift Surface (Performance Grade PG70-22)

$$\frac{\text{Compacted volume (C.Y.)} \times 3,816 \text{ Lb./C.Y.}}{2000 \text{ Lb./Ton}} = \text{Tons} \quad \text{Item 411-03.08}$$

NOTE: 1 inch per square yard weighs 106 ± pounds

Item No. 411-03 Grading "TL" Thin Lift Surface (Performance Grade PG76-22)

$$\frac{\text{Compacted volume (C.Y.)} \times 3,816 \text{ Lb./C.Y.}}{2000 \text{ Lb./Ton}} = \text{Tons} \quad \text{Item 411-03.09}$$

NOTE: inch per square yard weighs 106 ± pounds

Item No. 411-03 Grading "TLD" Thin Lift Surface (Performance Grade PG64-22)

$$\frac{\text{Compacted volume (C.Y.)} \times 3,816 \text{ Lb./C.Y.}}{2000 \text{ Lb./Ton}} = \text{Tons} \quad \text{Item 411-03.12}$$

NOTE: 1 inch per square yard weighs 106 ± pounds

Item No. 411-03 Grading "TLD" Thin Lift Surface (Performance Grade PG70-22)

$$\frac{\text{Compacted volume (C.Y.)} \times 3,816 \text{ Lb./C.Y.}}{2000 \text{ Lb./Ton}} = \text{Tons} \quad \text{Item 411-03.13}$$

Note: 1 inch per square yard weighs 106 ± pounds

Item No. 411-03 Grading "TLD" Thin Lift Surface (Performance Grade PG76-22)

$$\frac{\text{Compacted volume (C.Y.)} \times 3,816 \text{ Lb./C.Y.}}{2000 \text{ Lb./Ton}} = \text{Tons} \quad \text{Item 411-03.14}$$

NOTE: 1 inch per square yard weighs 106 ± pounds

Item No. 411-03 Grading "OGFC" Surface (Performance Grade PG70-22)

$$\frac{\text{Compacted volume (C.Y.)} \times 3,168 \text{ Lb./C.Y.}}{2000 \text{ Lb./Ton}} = \text{Tons} \quad \text{Item 411-03.22}$$

Note: 1 inch per square yard weighs 88 ± pounds

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Item No. 411-03 Grading "OGFC" Surface (Performance Grade PG76-22)

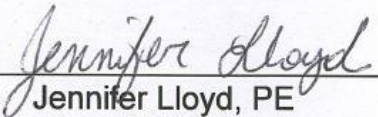
$$\frac{\text{Compacted volume (C.Y.)} \times 3,168 \text{ Lb./C.Y.}}{2000 \text{ Lb./Ton}} = \text{Tons} \qquad \text{Item 411-03.23}$$

Note: 1 inch per square yard weighs 88 ± pounds

Item No. 411-04 Grading "D" Surface (Performance Grade PG82-22)

$$\frac{\text{Compacted volume (C.Y.)} \times 3,816 \text{ Lb./C.Y.}}{2,000 \text{ Lb./Ton}} = \text{Tons} \qquad \text{Item 411-04.10}$$

NOTE: 1 inch per square yard weighs 106 ± pounds

  
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05/01/2015