

**SECTION 601 PORTLAND CEMENT CONCRETE PAVEMENT**

| MATERIAL                                                                                                                             | REFERENCE                    | PURP.                            | SAMPLED BY                      | MIN. FREQ.                       | MIN. QUANT.              | CERT.                    | SMALL QUANTITY | TYPICAL HANDLING TIME                            | REMARKS                                               |                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------------------------------|---------------------------------|----------------------------------|--------------------------|--------------------------|----------------|--------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                      | TESTED BY                    |                                  | METHOD                          |                                  | CONTAINER                | DISTR.                   |                |                                                  |                                                       |                                                                                                                                                                                                                                                                        |
| FOR DETAILS ON CONCRETE MIX DESIGNS, TESTS AND MATERIALS (ADMIXTURES, AGGREGATES, CEMENT AND WATER), SEE SECTION 901 OF THIS MANUAL. |                              |                                  |                                 |                                  |                          |                          |                |                                                  |                                                       |                                                                                                                                                                                                                                                                        |
| ADHESIVE-LUBRICANT                                                                                                                   |                              | 1005.03(b)<br>Mat. Lab           | Accept.                         | Proj. Engr.<br>S 601             | 1/adhesive lot           | 1 qt<br>Friction top can | ----           | 2,000 yd <sup>2</sup>                            | 10 days                                               | (QPL 8)<br>For use with preformed elastomeric compression joint seal. Mix well before sampling. Seal can tightly.                                                                                                                                                      |
| BOLSTER BLOCKS                                                                                                                       | Concrete (Class A Structure) | 601.09(h)                        | SEE SECTION 901 OF THIS MANUAL. |                                  |                          |                          |                |                                                  |                                                       |                                                                                                                                                                                                                                                                        |
| CONCRETE - CURED                                                                                                                     | Cores                        | 601.18<br>Mat. Lab/<br>Dist. Lab | Accept.                         | Mat. Lab/<br>Dist. Lab<br>TR 225 | 5/lot                    | 5 cores*                 | ----           | less than 2,000 yd <sup>2</sup> , make cylinders | dependent upon completion of lot & curing Min. 3 days | *Upon written notification by the Proj. Engr. to the Materials Engineer Administrator, cores will be taken & checked for strength & thickness. See "Application of Quality Assurance Specifications for Portland Cement Concrete Pavement and Structures" for details. |
|                                                                                                                                      | Surface Tolerance            | 601.11<br>Contractor             | Quality Control                 | Contractor<br>TR 641             | Each lot/each wheel path | Entire lot               | ----           | ----                                             | ----                                                  | Contractor must furnish an approved 25-ft profilograph and an approved 10-ft metal static straightedge. To be tested as soon as concrete has hardened.                                                                                                                 |
|                                                                                                                                      |                              | 601.11<br>Proj. Engr.            | Accept.                         | Proj. Engr.*                     | 1/location/<br>300 ft**  | ----                     | ----           | ----                                             | ----                                                  | *See QA manual for details.<br>**Shoulders, turnouts and crossovers shall be checked with an approved 10-ft metal static straightedge.                                                                                                                                 |

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| MATERIAL                  |                                         | REFERENCE                     | PURP.                   | SAMPLED BY         | MIN. FREQ.                           | MIN. QUANT.                                    | CERT.    | SMALL QUANTITY                   | TYPICAL HANDLING TIME | REMARKS                                                                                                                       |
|---------------------------|-----------------------------------------|-------------------------------|-------------------------|--------------------|--------------------------------------|------------------------------------------------|----------|----------------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------|
|                           |                                         | TESTED BY                     |                         | METHOD             |                                      | CONTAINER                                      | DISTR.   |                                  |                       |                                                                                                                               |
| CONCRETE - CURED (Cont'd) | Surface Tolerance (cont'd)              | 601.11 Dist. Lab              | Accept.                 | Dist. Lab TR 641   | Each lot/each wheel path             | Entire lot                                     | ----     | ----                             | 2 day                 | Travel lane and associated pavement will be tested after quality control testing and corrective work completed by contractor. |
|                           | Tine Texturing                          | 601.08(h) Proj. Engr.         | Accept.                 | Proj. Engr. TR 229 | 2/lot*                               | ----                                           | ----     | ----                             | 1 day                 | *See DOTD TR 229.                                                                                                             |
| CONCRETE - PLASTIC        | Compressive Strength                    | 601.18(b)(3) 901.12 Dist. Lab | Accept.*                | Proj. Engr. S 301  | 3 cyl/pour/ 100 yd <sup>3</sup> max. | 2 ft <sup>3</sup> 6 in. x 12 in. cylinder mold | ----     | ----                             | 30 days               | *For small quantity pavements and projects with less than 2000 yd <sup>2</sup> .                                              |
|                           |                                         | 601.07 601.17 Dist. Lab       | *                       | Proj. Engr. S 301  | 1 set of 3 cyl/ location/day         | 2 ft <sup>3</sup> 6 in. x 12 in. cylinder mold | ----     | ----                             | 1 day                 | *Used to determine early opening date for traffic or construction equipment.                                                  |
|                           | Rate of Application for Curing Compound | 601.02 Proj. Engr.            | Accept.                 | Proj. Engr.        | 1/day                                | *                                              | ----     | 200 yd <sup>2</sup> visual insp. | 1 day                 | *The curing compound must be applied uniformly to cover the surface of the plastic concrete.                                  |
|                           | Surface Finish                          | 601.08(f) Contractor          | Quality Control         | Contractor         | Entire surface area - each lot*      | ----                                           | ----     | ----                             | ----                  | *Tested for trueness with an approved 10-ft metal static straightedge.                                                        |
|                           | Thickness                               | 601.19 Contractor             | Quality Control         | Contractor         | *                                    | ----                                           | ----     | ----                             | ----                  | *Shall test sufficient to ensure specifications are met.                                                                      |
|                           |                                         | 601.18(b)(3) Proj. Engr.      | Accept.                 | Proj. Engr.        | *                                    | ----                                           | ----     | ----                             | 1 day                 | *Shall test sufficient to ensure plan thickness is met.                                                                       |
|                           | Tine Texturing                          | 601.08(h) Contractor          | Quality Control         | Contractor TR 229  | *                                    | ----                                           | ----     | ----                             | ----                  | *Sufficient number of random checks to ensure the required texture depth is achieved.                                         |
| CURING MATERIALS          | Burlap Cloth                            | 601.02 1011.01(b) Mat. Lab    | Accept.                 | Proj. Engr. S 601  | 1/shipment*                          | 36 in. x 36 in.                                | ----     | ----                             | 10 days               | *Visual inspection by Proj. Engr. Sample only if questionable. For cold weather protection.                                   |
|                           | Burlap & White Polyethylene Sheeting    | 601.02 1011.01(e) Mat. Lab    | Accept.                 | Proj. Engr. S 601  | 1/shipment*                          | 36 in. x 36 in.                                | ----     | ----                             | 10 days               | *Visual inspection by Proj. Engr. Sample only if questionable. For cold weather protection.                                   |
|                           | Curing Compound                         | 601.02 1011.01(a) Mat. Lab    | Prelim. Source Approval | Mfr. S 602         | 1 per 6 months                       | 1 qt Friction top can                          | ----     | ----                             | 21 days               | (QPL 65)                                                                                                                      |
|                           |                                         | 601.02 1011.01 (a) Mat. Lab   | Accept                  | Proj. Engr. S 601  | 1/shipment*                          | 1 qt Friction top can                          | CD 1 & 7 | ----                             | 10 days               | (QPL 65)<br>*Visual inspection by P.E. Sample only if questionable.                                                           |

## SECTION 601 PORTLAND CEMENT CONCRETE PAVEMENT (Cont'd)

| MATERIAL                  |                                                 | REF.                             | PURP.                   | SAMPLED BY        | MIN. FREQ.                 | MIN. QUANT.                          | CERT.         | SMALL QUANTITY                | TYPICAL HANDLING TIME | REMARKS                                                                                                       |
|---------------------------|-------------------------------------------------|----------------------------------|-------------------------|-------------------|----------------------------|--------------------------------------|---------------|-------------------------------|-----------------------|---------------------------------------------------------------------------------------------------------------|
|                           |                                                 | TESTED BY                        |                         | METHOD            |                            | CONTAINER                            | DISTR.        |                               |                       |                                                                                                               |
| CURING MATERIALS (Cond't) | Liquid Membrane Forming Compound                | 601.02<br>1011.01(a)<br>Mat. Lab | Prelim. Source Approval | Mfr. S 601        | 1/6 months                 | 1 qt Friction top can                | ----          | ----                          | 21 days               | (QPL 65)                                                                                                      |
|                           |                                                 | 601.02<br>1011.01(a)<br>Mat. Lab | Accept.                 | Proj. Engr. S 601 | 1/shipment*                | 1 qt Friction top can                | CC            | ----                          | 10 days               | (QPL 65)<br>*Visual inspection by Proj. Engr. Sample only if questionable.                                    |
|                           | Waterproof Paper                                | 601.02<br>1011.01(c)<br>Mat. Lab | Accept.                 | Proj. Engr. S 601 | 1/shipment*                | 36 in. x 36 in.                      | ----          | ----                          | 10 days               | *Visual inspection by Proj. Engr. Sample only if questionable. For cold weather protection.                   |
|                           | White Polyethylene Sheeting                     | 601.02<br>1011.01(d)<br>Mat. Lab | Accept.                 | Proj. Engr. S 601 | 1/shipment*                | 36 in. x 36 in.                      | ----          | ----                          | 10 days               | *Visual inspection by Proj. Engr. Sample only if questionable. For rain protection.                           |
| EPOXY RESIN SYSTEMS       | Type I, Grade C                                 | 601.02<br>1017.02<br>Mat. Lab    | Accept.                 | Proj. Engr. S 601 | 1/lot or shipment          | 1 qt each component Friction top can | ----          | 50 lin ft of joint            | 11 days               | (QPL 32)                                                                                                      |
| GEOTEXTILE FABRIC         |                                                 | 601.02<br>1019<br>Mat. Lab       | Prelim. Source Approval | Dist. Lab S 614   | 1/type/lot/source/shipment | 3 lin ft/roll with of fabric*        | ----          | ----                          | 10 days               | (QPL 61)<br>*Sample a minimum of 18 ft <sup>2</sup> .                                                         |
|                           |                                                 | 601.02<br>1019<br>Mat. Lab       | Accept.                 | Proj. Engr. S 601 | 1/type/source/shipment     | 3 lin ft/roll width of fabric*       | CD**<br>1 & 7 | 150 yd <sup>2</sup> of fabric | 10 days               | (QPL 61)<br>*Sample a minimum of 18 ft <sup>2</sup> .<br>**Sample when not accompanied by CD or questionable. |
| JOINT FILLERS             | Preformed Asphalt Ribbon                        | 601.02<br>1005.01(d)<br>Mat. Lab | Accept.                 | Proj. Engr. S 601 | 1/5000 lin ft              | 1 roll                               | ----          | 2,000 yd <sup>2</sup>         | 11 days               | ----                                                                                                          |
|                           | Preformed Bituminous Type                       | 601.02<br>1005.01(c)<br>Mat. Lab | Accept.                 | Proj. Engr. S 601 | 1/5000 lin ft              | 36 in. length                        | ----          | 2,000 yd <sup>2</sup>         | 10 days               | ----                                                                                                          |
|                           | Preformed Closed Cell Polyethylene Joint Filler | 707.02<br>1005.01(e)<br>Mat. Lab | Accept.                 | Proj. Engr. S 601 | 1/5000 lin ft              | 36 in. length                        | ----          | 2,000 yd <sup>2</sup>         | 11 days               | (QPL 18)                                                                                                      |

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| MATERIAL                           |                                     | REFERENCE                  | PURP.                   | SAMPLED BY        | MIN. FREQ           | MIN. QUANT.            | CERT.    | SMALL QUANTITY        | TYPICAL HANDLING TIME | REMARKS                                                |
|------------------------------------|-------------------------------------|----------------------------|-------------------------|-------------------|---------------------|------------------------|----------|-----------------------|-----------------------|--------------------------------------------------------|
|                                    |                                     | TESTED BY                  |                         | METHOD            |                     | CONTAINER              | DISTR.   |                       |                       |                                                        |
| JOINT FILLERS (Cont'd)             | Preformed Polyurethane Foam         | 1005.07 Mat. Lab           | Accept.                 | Proj. Engr. S 601 | 1/5000 lin ft/ type | 36 in. length          | -----    | 2,000 yd <sup>2</sup> | 11 days               | -----                                                  |
|                                    | Preformed Resilient Bituminous Type | 601.02 1005.01(a) Mat. Lab | Accept.                 | Proj. Engr. S 601 | 1/5000 lin ft*      | 36 in. length          | -----    | 2,000 yd <sup>2</sup> | 10 days               | -----                                                  |
|                                    | Wood                                | 601.02 1005.01(b) Mat. Lab | Accept.                 | Proj. Engr. S 601 | 1/5000 lin ft*      | 36 in. length          | -----    | 2,000 yd <sup>2</sup> | 10 days               | -----                                                  |
| JOINT FORMER/ SEALER (Combination) | Preformed Joint Former/Sealer       | 1005.04 Mat. Lab           | Accept.                 | Proj. Engr. S 601 | 1/5000 lin ft*      | 6 ft length            | -----    | 2,000 yd <sup>2</sup> | 11 days               | -----                                                  |
| JOINT SEALANT (Extruded)           | Silicone Polymer                    | 1005.02(c) Mat. Lab        | Prelim. Source Approval | Dist. Lab S 611   | 1/batch or shipment | 1 gal Friction top can | CA 7     | -----                 | 30 days               | (QPL 42)                                               |
|                                    |                                     | 1005.02(c) Mat. Lab        | Accept.                 | Proj. Engr. S 611 | 1/shipment*         | -----                  | CD 1 & 7 | 2,000 yd <sup>2</sup> | 30 days               | (QPL 42)<br>*Sample only if questionable.              |
|                                    |                                     | 1005.02(c) Mat. Lab        | Accept.*                | Proj. Engr. S 611 | 1/batch or shipment | 1 gal Friction top can | CA 7     | 2,000 yd <sup>2</sup> | 30 days               | (QPL 42)<br>*When material is not accompanied by a CD. |
| JOINT SEALANT (Hot Poured)         | Rubberized Asphaltic Type           | 1005.02(a) Mat. Lab        | Prelim. Source Approval | Dist. Lab S 611   | 1/batch or shipment | One container          | CA 7     | -----                 | 11 days               | (QPL 67)                                               |
|                                    |                                     | 1005.02(a) Mat. Lab        | Accept.                 | Proj. Engr. S 611 | 1/shipment*         | -----                  | CD 1 & 7 | -----                 | 11 days               | (QPL 67)<br>*Sample only if questionable.              |
|                                    |                                     | 1005.02(a) Mat. Lab        | Accept.*                | Proj. Engr. S 611 | 1/batch or shipment | One container          | CA 7     | 2,000 yd <sup>2</sup> | 11 days               | (QPL 67)<br>*When material is not accompanied by a CD. |

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| MATERIAL                                                 |                          | REF.                                    | PURP.                      | SAMPLED BY           | MIN. FREQ.                               | MIN. QUANT.                 | CERT.    | SMALL QUANTITY        | TYPICAL HANDLING TIME | REMARKS                                                                                                                           |
|----------------------------------------------------------|--------------------------|-----------------------------------------|----------------------------|----------------------|------------------------------------------|-----------------------------|----------|-----------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------|
|                                                          |                          | TESTED BY                               |                            | METHOD               |                                          | CONTAINER                   | DISTR.   |                       |                       |                                                                                                                                   |
| JOINT SEALANT<br>(Liquid Poured or Extruded)<br>(Cont'd) | Polyurethane Polymer     | 1005.02(b)<br>Mat. Lab                  | Prelim.<br>Source Approval | Dist. Lab<br>S 611   | 1/batch or shipment                      | One unit of each component* | CA 7     | ----                  | 14 days               | (QPL 5)<br>*One unit of each component selected at random and submitted as sample.                                                |
|                                                          |                          | 1005.02(b)<br>Mat. Lab                  | Accept.                    | Proj. Engr.<br>S 611 | 1/shipment*                              | ----                        | CD 1 & 7 | ----                  | 14 days               | (QPL 5)<br>*When material is accompanied by a CD, sample only if questionable.                                                    |
|                                                          |                          | 1005.02(b)<br>Mat. Lab                  | Accept.*                   | Proj. Engr.<br>S 611 | 1/batch or shipment                      | **                          | CA 7     | 2,000 yd <sup>2</sup> | 14 days               | (QPL 5)<br>*When material is not accompanied by a CD.<br>**One unit of each component selected at random and submitted as sample. |
| JOINT SEALANT<br>(Backing Material)                      | Rods                     | 1005.02(b)<br>1005.02(c)<br>Mat. Lab    | Accept.                    | ----                 | ----                                     | ----                        | ----     | ----                  | ----                  | For use with polyurethane polymer (QPL 5) and silicone polymer (QPL 42) joint seals. Visual inspection by Proj. Engr.             |
|                                                          | Rods<br>(Heat Resistant) | 1005.02(a)<br>Proj. Engr.               | Accept.                    | ----                 | ----                                     | ----                        | ----     | ----                  | ----                  | (QPL 67)<br>For use with hot poured joint sealants. Visual inspection by Proj. Engr.                                              |
| JOINT SEALANTS<br>(Primer)                               |                          | 1005.02(b)<br>1005.02(c)<br>Proj. Engr. | Accept.                    | ----                 | ----                                     | ----                        | ----     | ----                  | ----                  | For use with polyurethane polymers (QPL 5) and silicone polymers (QPL 42) joint sealants. Visual inspection by Proj. Engr.        |
| JOINT SEAL<br>(Preformed)                                | Elastomeric Compression  | 1005.03<br>Mat. Lab                     | Accept.                    | Proj. Engr.<br>S 601 | 1/6000 lin ft/<br>seal lot/size/<br>type | 8 ft length                 | CA 7     | 2,000 yd <sup>2</sup> | 14 days               | (QPL 6)<br>Proj. Engr. forwards CA with sample to Mat. Lab.                                                                       |
| LIME                                                     | Hydrated                 | 1018.03<br>Mat. Lab                     | Accept.                    | -----                | 1/shipment                               | -----                       | CD 1 & 7 | -----                 | -----                 | (QPL 34)                                                                                                                          |

## SECTION 601 PORTLAND CEMENT CONCRETE PAVEMENT (Cont'd)

| MATERIAL                   |                                  | REF.                             | PURP.   | SAMPLED BY           | MIN. FREQ.                                   | MIN. QUANT.                             | CERT.  | SMALL QUANTITY        | TYPICAL HANDLING TIME | REMARKS                                                                                                                                       |
|----------------------------|----------------------------------|----------------------------------|---------|----------------------|----------------------------------------------|-----------------------------------------|--------|-----------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
|                            |                                  | TESTED BY                        |         | METHOD               |                                              | CONTAINER                               | DISTR. |                       |                       |                                                                                                                                               |
| LUBRICANT-ADHESIVE         |                                  | 1005.07<br>Proj. Engr.           | Accept. | -----                | -----                                        | -----                                   | -----  | -----                 | -----                 | (QPL 18)<br>For use with preformed polyurethane foam joint seal. Visual inspection by Proj. Engr.                                             |
| NON-SHRINK PATCHING SYSTEM | Non-Shrink Grout                 | 601.13(a)<br>1018.27<br>Mat. Lab | Accept. | Proj. Engr.<br>S 601 | 1/source                                     | 1 Sack                                  | -----  | 20 sacks              | 17 days               | (QPL 47)                                                                                                                                      |
| REINFORCEMENT              | Adhesive Anchor Systems          | 601.09<br>Mat. Lab               | Accept. | Proj. Engr.<br>S 501 | 1/type                                       | -----                                   | -----  | 2,000 yd <sup>2</sup> | 12 days               | (QPL 52)                                                                                                                                      |
|                            | Dowel Bars                       | 1009.04<br>Mat. Lab              | Accept. | Proj. Engr.<br>S 501 | 1/shipment/<br>pavement<br>depth             | 4 ft<br>assembly<br>with dowel<br>bars* | -----  | 2,000 yd <sup>2</sup> | 9 days                | *For mechanical placement, only one dowel bar required.                                                                                       |
|                            | Mechanical Butt Splicing Devices | 806.07<br>Mat. Lab               | Accept. | Proj. Engr.<br>S 501 | 1/size/<br>shipment                          | -----                                   | -----  | 2,000 yd <sup>2</sup> | 9 days                | (QPL 44)                                                                                                                                      |
|                            | Tie Bars                         | 1009.03<br>Mat. Lab*             | Accept. | Proj. Engr.<br>S 501 | 1/size/<br>grade/<br>150,000 lb/<br>source** | 2 bars                                  | -----  | 2,000 yd <sup>2</sup> | 9 days                | *Dist. Lab in Dist. 02.<br>**If listed on QPL 71, material with a CA (Distr. 1) need not be sampled. Sample for verification if questionable. |
| TAR PAPER                  |                                  | 601.09(h)<br>Mat. Lab            | Accept. | Proj. Engr.<br>S 601 | 1/source*                                    | 2 ft x 2 ft                             | -----  | -----                 | 9 days                | For Bolster Blocks.<br>*Visual inspection by Proj. Engr. Sample only if questionable.                                                         |
|                            |                                  |                                  |         |                      |                                              |                                         |        |                       |                       |                                                                                                                                               |