

**STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
SUPPLEMENTAL SPECIFICATION 884  
CONCRETE PAVEMENT WITH WARRANTY**

**April 18, 2008**

- 884.01 General**
- 884.02 Maintenance Bond**
- 884.03 Warranty Item Coverage**
- 884.04 Concrete Mix Design and Construction**
- 884.05 Annual Review Process**
- 884.06 Remedial Actions**
- 884.07 Appeal Process**
- 884.08 Method of Measurement**
- 884.09 Basis of Payment**

**884.01 General.** This work consists of constructing a portland cement concrete pavement on a prepared surface according to these specifications and in reasonably close conformity with the lines, grades and typical sections shown on the plans or established by the Engineer. Use conventional concrete paving equipment, methods and materials as specified in 451 or 452, except as modified by this specification. Construct either Item 451 Reinforced Concrete Pavement or Item 452 Non-Reinforced Concrete Pavement as modified by this specification at the thickness specified. Warrant the concrete pavement for seven years.

**884.02 Maintenance Bond.** Furnish a maintenance bond for a seven year period in an amount equal to 30 percent of the total amount bid for Item 884 with the performance and payment bonds specified in 103.05.

Ensure the Surety that underwrites the maintenance bond has an A.M. Best rating of “A-” or better. Include the cost of the maintenance bond in the pay item for the premium for the contract performance and payment bonds.

The effective date of the maintenance bond is the date the Department’s Form C-85 is issued for the pavement. The Department will issue a final C-85 within 30 days after all of the pavement items, including all safety items, are completed and accepted, and the pavement is open to traffic. The Department will issue a partial C-85 within 30 days after the pavement is completed and accepted, and all safety items are in place to allow the pavement to be safely open to traffic during the winter months from December 1 to April 30. The Department will issue no more than one C-85 each calendar year except with approval of the Director.

After a final or partial Form C-85 is issued, the Department will notify the Surety. After the final Form C-85 is issued, the Department will also establish all final quantities for the project

and the project will be finalized using standard procedures. The maintenance bond expires seven years from the issuance of Form C-85.

Maintain the liability insurance specified in 107.12, insuring against Contractor or Contractor authorized operations negligently performed during the warranty period. Ensure the insurance is in effect throughout the warranty period. Send a copy of the Certificate of Insurance to the District each year.

**884.03 Warranty Item Coverage.** Warranty items and Remedial Actions are specified in Table A. The warranty applies to all Item 884 pavement (including but not limited to the mainline pavement lanes, shoulders, acceleration/deceleration lanes, collector/distributors and ramps). The warranty does not apply to structural problems below the pavement placed as part of this project, provided the structural problem is not the fault of the Contractor. The Threshold Levels are based on the 0.1 mile (160 m) Segments described in 884.05.

Do not construe meeting the minimum requirements and guidelines of this specification as a warranty, expressed or implied, as to the material properties and workmanship efforts required to meet the performance criteria set forth in Table A.

The Design Designation in the plan is an indication of the level of traffic expected on this project. Design information, criteria, and calculations are on file with the Department. The Department will waive the warranty requirements of a Section if the cumulative number of Equivalent 18,000 pound Single Axle Loads (ESAL's), calculated using current information and established Department procedures, exceeds the design calculated ESAL's, prorated for the period of years specified in the pay item, by 20 percent or more.

**884.04 Concrete Mix Design and Construction.**

**Concrete Mix Design.** Ensure the concrete mix design meets, at a minimum, the requirements of 499, Class C and any other material requirements of 451 and 452. The Contractor may submit a mix design with more cement than specified above. Submit the proposed mix design in writing to the Engineer. Include in the request historic documentation of compressive and/or flexural strength at 3, 5, 7 and 28 days. Provide certified test data according to 101.03 from a recognized testing laboratory that shows the proposed proportioning will meet a 4000 psi (28.0 MPa) at 28 days design strength requirement. A recognized testing laboratory is any laboratory regularly inspected and approved by the Cement and Concrete Reference Laboratory. The Director will approve proposed mix designs. Any adjustments will be approved by the Engineer.

**Construction.** Do not construct transverse joints at less than 12 foot (3.6 m) minimum spacing.

Construct the completed surface to meet 451.12, unless the surface tolerance requirements for the portland cement concrete pavement is modified elsewhere in the contract documents for this project.

Notify the Engineer a minimum of 24 hours prior to start of any concrete paving.

**884.05 Annual Review Process.** The project will be divided into 1 mile (1600 m) Sections. The width of each Section will be the width of a single lane or shoulder. Each Section will be divided into 0.1 mile (160 m) Segments.

Each year, between March 1 and April 30, the project will be reviewed by a District Review Team (DRT). This date period may be revised by mutual agreement of the Department and Contractor. The DRT will notify the Contractor of the scheduled review. The Contractor or any other interested party may attend the annual review, for observation only. Any comments by the Contractor or other interested party will be recorded by the DRT. The DRT will select at least two Segments in each Section to review, but may review the entire Section. The Department will issue the results in writing to the Contractor within 15 days after the completion of the review.

The District Deputy Director may waive this yearly review for all or part of the project based on the results of a preliminary review by a member of the DRT. Any such waiver will be in writing to the Contractor.

**884.06 Remedial Actions.** The intent of this contract is for the Contractor to provide a maintenance free pavement. If performing routine maintenance during the warranty period, limit this routine maintenance to repairs authorized by the Department.

Provide construction traffic control when performing any work required or allowed by this specification during the warranty period in accordance with current Department policy and the Ohio Manual of Uniform Traffic Control Devices for Streets and Highways. Obtain Department approval for the time the work will be performed. Any major change in Department construction traffic control policy from the time of bid will be considered a changed condition.

Supply all materials, equipment and labor to perform Remedial Actions at no additional cost to the Department. Obtain approval of the Engineer for portland cement concrete, joint sealer material, or other materials used for remedial action work. The Engineer may approve alternatives to the extent or type of specified Remedial Action.

Replace any pavement markings or raised pavement markers (RPM) removed or obliterated while performing a Remedial Action with pavement markings or RPMs equal to or better than the original products at no cost to the Department.

Perform all remedial actions on or before November 15. If an appeal process goes to Step 3, the District may revise the date for completion of the Remedial Action for the appealed item. Prior to performing a Remedial Action, submit a Remedial Action plan to the Engineer for approval. State in the plan when and how the Remedial Action will be performed, what material will be used and how traffic will be controlled. Warrant Remedial Action work for the remainder of the warranty period.

The Department will perform emergency work repairing pavement distresses that are hazardous to the traveling public. If the emergency work is extensive, the Department may authorize the Contractor to perform the repairs. The District Construction Engineer (DCE) will

determine if the distress is or is not the responsibility of the Contractor. If the DCE determines the distress is the responsibility of the Contractor, the cost, including construction traffic control, of emergency work performed by the Department will be charged to the Contractor. If the DCE determines the distress is not the responsibility of the Contractor, the Department will pay for Contractor performed repairs according to 109.05. The Contractor is not responsible for pavement damage beyond the Contractor's control (i.e., car fire, oil spill, etc.). The Contractor may appeal the DCE's determination according to 884.07.

**884.07 Appeal Process.** Findings of the DRT may be appealed. Submit any appeal to the DCE, in writing, within 15 days after receipt of the written results of the DRT.

The DCE will evaluate appeals. This evaluation will include reviewing the disputed area in the field and consulting with the Office of Construction Administration. The evaluation may also include reviewing test data, obtaining samples, or interviewing Department (District or Central Office) or Contractor employees. The DCE's determination will be issued in writing to the Contractor within 45 days after the DCE receives the appeal.

If in disagreement with the DCE's determination, appeal the determination using Step 3 of Proposal Note 109 Dispute Resolution and Administrative Claim Process.

**884.08 Method of Measurement.** The Department will use 451.18 or 452.03 for measurement.

**884.09 Basis of Payment.** The requirements of 451.19 apply. The Department will not pay for materials, equipment, or labor required to perform Remedial Actions or routine maintenance. Payment for accepted quantities completed in place will be made at the contract price for:

<b>Item</b>	<b>Unit</b>	<b>Description</b>
884	Square yard (Square Meter)	Portland Cement Concrete Pavement (7 year warranty)

