



# CERTIFICATE OF ACCREDITATION



## **Bowser-Morner, Inc.**

in

**Dayton, Ohio, USA**

has demonstrated proficiency for the testing of construction materials and has conformed to the requirements established in AASHTO R 18 and the AASHTO Accreditation policies established by the AASHTO Committee on Materials and Pavements.

The scope of accreditation can be viewed on the Directory of AASHTO Accredited Laboratories ([aashtoresource.org](http://aashtoresource.org)).

A handwritten signature in black ink, appearing to read 'Jim Tymon', written over a horizontal line.

Jim Tymon,  
*AASHTO Executive Director*

A handwritten signature in black ink, appearing to read 'Moe Jamshidi', written over a horizontal line.

Moe Jamshidi,  
*AASHTO COMP Chair*

This certificate was generated on 01/22/2021 at 1:39 PM Eastern Time. Please confirm the current accreditation status of this laboratory at [aashtoresource.org/aap/accreditation-directory](http://aashtoresource.org/aap/accreditation-directory)



# SCOPE OF AASHTO ACCREDITATION FOR:

Bowser-Morner, Inc.

in Dayton, Ohio, USA

## Quality Management System

### Standard:

### Accredited Since:

R18	Establishing and Implementing a Quality System for Construction Materials Testing Laboratories	11/15/1995
ISO/IEC 17025	General Requirements for the Competence of Testing and Calibration Laboratories	11/15/2000
C1077 (Aggregate)	Laboratories Testing Concrete and Concrete Aggregates	11/17/2011
C1077 (Concrete)	Laboratories Testing Concrete and Concrete Aggregates	12/20/2011
C1093 (Masonry)	Accreditation of Testing Agencies for Unit Masonry	01/10/2011
D3666 (Aggregate)	Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials	01/10/2011
D3666 (Asphalt Mixture)	Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials	06/25/2018
D3740 (Soil)	Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction	01/10/2011
E329 (Aggregate)	Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction	01/10/2011
E329 (Asphalt Mixture)	Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction	06/25/2018
E329 (Concrete)	Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction	02/23/2012



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## Asphalt Mixture

### Standard:

### Accredited Since:

R68	Preparation of Asphalt Mixtures by Means of the Marshall Apparatus	03/10/2016
T30	Mechanical Analysis of Extracted Aggregate	11/15/1995
T164	Quantitative Extraction of Asphalt Binder from Hot Mix Asphalt (HMA)	11/15/1995
T166	Bulk Specific Gravity of Compacted Hot Mix Asphalt Using Saturated Surface-Dry Specimens	11/15/1995
T209	Maximum Specific Gravity of Hot Mix Asphalt Paving Mixtures	11/15/1995
T245	Resistance to Plastic Flow of Asphalt Mixtures Using Marshall Apparatus	11/15/1995
T269	Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures	11/15/1995
T275	Bulk Specific Gravity of Compacted Bituminous Mixtures Using Paraffin-Coated Specimens	11/15/1995
D1188	Bulk Specific Gravity of Compacted Bituminous Mixtures Using Paraffin-Coated Specimens	11/15/1995
D2041	Maximum Specific Gravity of Hot Mix Asphalt Paving Mixtures	11/15/1995
D2172	Quantitative Extraction of Asphalt Binder from Hot Mix Asphalt (HMA)	11/15/1995
D2726	Bulk Specific Gravity of Compacted Hot Mix Asphalt Using Saturated Surface-Dry Specimens	11/15/1995
D3203	Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures	11/15/1995
D5444	Mechanical Analysis of Extracted Aggregate	11/15/1995
D6926	Preparation of Asphalt Mixtures by Means of the Marshall Apparatus	03/10/2016
D6927	Resistance to Plastic Flow of Asphalt Mixtures Using Marshall Apparatus	11/15/1995



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## Soil

### Standard:

### Accredited Since:

R58	Dry Preparation of Disturbed Soil and Soil Aggregate Samples for Test	11/15/1995
T88	Particle Size Analysis of Soils by Hydrometer	11/15/1995
T89	Determining the Liquid Limit of Soils (Atterberg Limits)	11/15/1995
T90	Plastic Limit of Soils (Atterberg Limits)	11/15/1995
T99	The Moisture-Density Relations of Soils Using a 5.5 lb [2.5 kg] Rammer and a 12 in. [305 mm] Drop	11/15/1995
T100	Specific Gravity of Soils	11/15/1995
T134	Moisture-Density Relations of Soil-Cement Mixtures	11/15/1995
T135	Wetting-and-Drying Test of Compacted Soil-Cement Mixtures	11/15/1995
T136	Freezing-and-Thawing Tests of Compacted Soil-Cement Mixtures	11/15/1995
T180	Moisture-Density Relations of Soils Using a 10 lb [4.54 kg] Rammer and an 18 in. [457 mm] Drop	11/15/1995
T193	The California Bearing Ratio	11/15/1995
T208	Unconfined Compressive Strength of Cohesive Soil	11/15/1995
T215	Permeability of Granular Soils (Constant Head)	11/15/1995
T216	One-Dimensional Consolidation Properties of Soils Using Incremental Loading	11/15/1995
T236	Direct Shear Test of Soils Under Consolidated Drained Conditions	11/15/1995
T265	Laboratory Determination of Moisture Content of Soils	11/15/1995
T267	Determination of Organic Content in Soils by Loss on Ignition	11/15/1995
T288	Minimum Soil Resistivity	05/10/2013
T289	pH of Soils for Corrosion Testing	05/10/2013
T296	Unconsolidated, Undrained Compressive Strength of Cohesive Soils in Triaxial Compression	11/15/1995
T297	Consolidated-Undrained Triaxial Compression Test on Cohesive Soils	11/15/1995
T310	In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)	11/15/1995
T311	Grain-Size Analysis of Granular Soil Materials	11/15/1995



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## Soil (Continued)

<b>Standard:</b>	<b>Accredited Since:</b>
D421 Dry Preparation of Disturbed Soil and Soil Aggregate Samples for Test	11/15/1995
D422 Particle Size Analysis of Soils by Hydrometer	11/15/1995
D558 Moisture-Density Relations of Soil-Cement Mixtures	11/15/1995
D559 Wetting-and-Drying Test of Compacted Soil-Cement Mixtures	11/15/1995
D560 Freezing-and-Thawing Tests of Compacted Soil-Cement Mixtures	11/15/1995
D698 The Moisture-Density Relations of Soils Using a 5.5 lb [2.5 kg] Rammer and a 12 in. [305 mm] Drop	11/15/1995
D854 Specific Gravity of Soils	11/15/1995
D1140 Amount of Material in Soils Finer than the No. 200 (75- $\mu$ m) Sieve	11/15/1995
D1557 Moisture-Density Relations of Soils Using a 10 lb [4.54 kg] Rammer and an 18 in. [457 mm] Drop	11/15/1995
D1883 The California Bearing Ratio	11/15/1995
D2166 Unconfined Compressive Strength of Cohesive Soil	11/15/1995
D2216 Laboratory Determination of Moisture Content of Soils	11/15/1995
D2434 Permeability of Granular Soils (Constant Head)	11/15/1995
D2435 One-Dimensional Consolidation Properties of Soils Using Incremental Loading	11/15/1995
D2487 Classification of Soils for Engineering Purposes (Unified Soil Classification System)	11/15/1995
D2488 Description and Identification of Soils (Visual-Manual Procedure)	11/15/1995
D2850 Unconsolidated, Undrained Compressive Strength of Cohesive Soils in Triaxial Compression	11/15/1995
D2974 Determination of Organic Content in Soils by Loss on Ignition	09/22/2011
D3080 Direct Shear Test of Soils Under Consolidated Drained Conditions	03/10/2016
D4318 Determining the Liquid Limit of Soils (Atterberg Limits)	11/15/1995
D4318 Plastic Limit of Soils (Atterberg Limits)	11/15/1995
D4546 One-Dimensional Swell or Settlement Potential of Cohesive Soils	11/15/1995
D4767 Consolidated-Undrained Triaxial Compression Test on Cohesive Soils	11/15/1995



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## Soil (Continued)

<b>Standard:</b>	<b>Accredited Since:</b>
D4972 pH Testing of Soils	09/22/2011
D5084 Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter	11/15/1995
D6913 Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis	05/10/2013
D6938 In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)	11/15/1995
D7928 Particle-Size Distribution (Gradation) of Fine-Grained Soils Using the Sedimentation (Hydrometer) Analysis	05/15/2018
G187 Soil Resistivity Using the Two-Electrode Soil Box	05/15/2018



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## Rock

### Standard:

### Accredited Since:

D4543 Preparing Rock Core as Cylindrical Test Specimens and Verifying Conformance to Dimensional and Shape Tolerances	05/15/2018
D4644 Slake Durability of Shales and Weak Rocks	09/22/2011
D5731 Point Load Strength Index of Rock	05/10/2013
D7012 Compressive Strength of Rock Core Specimens (Method C)	09/22/2011



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**Aggregate**

<b>Standard:</b>	<b>Accredited Since:</b>
R76 Reducing Samples of Aggregate to Testing Size	11/15/1995
R90 Sampling Aggregate	09/26/2013
T11 Materials Finer Than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing	11/15/1995
T19 Bulk Density ("Unit Weight") and Voids in Aggregate	11/15/1995
T21 Organic Impurities in Fine Aggregates for Concrete	11/15/1995
T27 Sieve Analysis of Fine and Coarse Aggregates	11/15/1995
T37 Sieve Analysis of Mineral Filler for Road and Paving Materials	11/15/1995
T84 Specific Gravity (Relative Density) and Absorption of Fine Aggregate	11/15/1995
T85 Specific Gravity and Absorption of Coarse Aggregate	11/15/1995
T96 Resistance to Abrasion of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine	11/15/1995
T104 Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate	11/15/1995
T112 Clay Lumps and Friable Particles in Aggregate	11/15/1995
T113 Lightweight Pieces in Aggregate	11/15/1995
T176 Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test	11/15/1995
T210 Aggregate Durability Index	11/15/1995
T255 Total Moisture Content of Aggregate by Drying	11/15/1995
T304 Uncompacted Void Content of Fine Aggregate (Influenced by Shape, Texture, and Grading)	11/15/1995
T327 Resistance to Abrasion by Micro-Deval (Coarse Aggregate)	11/15/1995
T335 Determining the Percentage of Fractured Particles in Coarse Aggregate	05/10/2013
C29 Bulk Density ("Unit Weight") and Voids in Aggregate	11/15/1995
C40 Organic Impurities in Fine Aggregates for Concrete	11/15/1995
C87 Effect of Organic Impurities in Fine Aggregate on Strength of Mortar	11/27/2017
C88 Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate	11/15/1995





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## Aggregate (Continued)

Standard:	Accredited Since:
C117 Materials Finer Than 75- $\mu$ m (No. 200) Sieve in Mineral Aggregates by Washing	11/15/1995
C123 Lightweight Pieces in Aggregate	11/15/1995
C127 Specific Gravity and Absorption of Coarse Aggregate	11/15/1995
C128 Specific Gravity (Relative Density) and Absorption of Fine Aggregate	11/15/1995
C131 Resistance to Abrasion of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine	11/15/1995
C136 Sieve Analysis of Fine and Coarse Aggregates	11/15/1995
C142 Clay Lumps and Friable Particles in Aggregate	11/15/1995
C535 Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine	11/15/1995
C566 Total Moisture Content of Aggregate by Drying	11/15/1995
C702 Reducing Samples of Aggregate to Testing Size	11/15/1995
C1252 Uncompacted Void Content of Fine Aggregate (Influenced by Shape, Texture, and Grading)	11/15/1995
D75 Sampling Aggregate	09/26/2013
D546 Sieve Analysis of Mineral Filler for Road and Paving Materials	11/15/1995
D2419 Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test	11/15/1995
D3744 Aggregate Durability Index	11/15/1995
D4791 Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate	11/15/1995
D5821 Determining the Percentage of Fractured Particles in Coarse Aggregate	05/10/2013
D6928 Resistance to Abrasion by Micro-Deval (Coarse Aggregate)	11/15/1995
D7428 Resistance to Abrasion by Micro-Deval (Fine Aggregate)	02/25/2014
CRD-C130 Estimating Scratch Test Hardness of Coarse Aggregate Particles	05/15/2018



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**Concrete**

<b>Standard:</b>		<b>Accredited Since:</b>
M201	Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the testing of Hydraulic Cements and Concretes	10/15/2014
R39	Making and Curing Concrete Test Specimens in the Laboratory	09/01/1996
R60	Sampling Freshly Mixed Concrete	09/01/1996
T22	Compressive Strength of Cylindrical Concrete Specimens	09/01/1996
T23	Making and Curing Concrete Test Specimens in the Field	09/01/1996
T24	Obtaining and Testing Drilled Cores and Sawed Beams of Concrete	09/01/1996
T97	Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)	09/01/1996
T119	Slump of Hydraulic Cement Concrete	09/01/1996
T121	Density (Unit Weight), Yield, and Air Content of Concrete	09/01/1996
T148	Measuring Thickness of Concrete Elements Using Drilled Concrete Cores	09/01/1996
T152	Air Content of Freshly Mixed Concrete by the Pressure Method	09/01/1996
T160	Length Change of Hardened Hydraulic-Cement, Mortar, and Concrete	09/01/1996
T161	Resistance of Concrete to Rapid Freezing and Thawing	09/01/1996
T177	Flexural Strength of Concrete (Using Simple Beam With Center-Point Loading)	09/01/1996
T196	Air Content of Freshly Mixed Concrete by the Volumetric Method	09/01/1996
T197	Time of Setting of Concrete Mixtures by Penetration Resistance	09/01/1996
T198	Splitting Tensile Strength of Cylindrical Concrete Specimens	09/01/1996
T231 (7000 psi and below)	Capping Cylindrical Concrete Specimens	05/10/2013
T303	Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)	10/15/2014
T309	Temperature of Freshly Mixed Portland Cement Concrete	09/01/1996
C31	Making and Curing Concrete Test Specimens in the Field	09/01/1996
C39	Compressive Strength of Cylindrical Concrete Specimens	09/01/1996
C42	Obtaining and Testing Drilled Cores and Sawed Beams of Concrete	09/01/1996



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## Concrete (Continued)

Standard:		Accredited Since:
C78	Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)	09/01/1996
C138	Density (Unit Weight), Yield, and Air Content of Concrete	09/01/1996
C143	Slump of Hydraulic Cement Concrete	09/01/1996
C157	Length Change of Hardened Hydraulic-Cement, Mortar, and Concrete	09/01/1996
C172	Sampling Freshly Mixed Concrete	09/01/1996
C173	Air Content of Freshly Mixed Concrete by the Volumetric Method	09/01/1996
C174	Measuring Thickness of Concrete Elements Using Drilled Concrete Cores	09/01/1996
C192	Making and Curing Concrete Test Specimens in the Laboratory	09/01/1996
C215	Fundamental Transverse, Longitudinal and Torsional Frequencies of Concrete Specimens	09/01/1996
C227	Potential Alkali Reactivity of Cement-Aggregate Combinations (Mortar-Bar Method)	11/15/1995
C231	Air Content of Freshly Mixed Concrete by the Pressure Method	09/01/1996
C289	Potential Alkali-Silica Reactivity of Aggregates (Chemical Method)	03/18/2005
C293	Flexural Strength of Concrete (Using Simple Beam With Center-Point Loading)	09/01/1996
C403	Time of Setting of Concrete Mixtures by Penetration Resistance	09/01/1996
C418	Abrasion Resistance of Concrete by Sandblasting	09/01/1996
C469	Static Modulus of Elasticity and Poisson's Ratio of Concrete in Compression	09/01/1996
C496	Splitting Tensile Strength of Cylindrical Concrete Specimens	09/01/1996
C511	Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the testing of Hydraulic Cements and Concretes	02/23/2012
C512	Creep of Concrete in Compression	09/01/1996
C586	Potential Alkali Reactivity of Carbonate Rocks for Concrete Aggregates (Rock Cylinder Method)	01/28/2010
C617 (7000 psi and below)	Capping Cylindrical Concrete Specimens	02/23/2012
C642	Density, Absorption, and Voids in Hardened Concrete	09/01/1996
C666	Resistance of Concrete to Rapid Freezing and Thawing	09/01/1996



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## Concrete (Continued)

Standard:		Accredited Since:
C672	Scaling Resistance of Concrete Surfaces Exposed to De-icing Chemicals	01/13/2015
C803	Penetration Resistance of Hardened Concrete	09/01/1996
C805	Rebound Number of Hardened Concrete	09/01/1996
C1064	Temperature of Freshly Mixed Portland Cement Concrete	09/01/1996
C1105	Length Change of Concrete Due to Alkali-Carbonate Rock Reaction	09/01/1996
C1152	Acid-Soluble Chloride in Mortar and Concrete	09/01/1996
C1218	Water-Soluble Chloride in Mortar and Concrete	09/01/1996
C1231 (7000 psi and below)	Use of Unbonded Caps in Determination of Compressive Strength of Hardened Concrete Cylinders	02/23/2012
C1260	Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)	11/15/1995
C1293	Determination of Length Change of Concrete Due to Alkali-Silica Reaction	09/01/1996
C1542	Measuring Length of Concrete Cores	10/15/2014
C1567	Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method)	09/01/1996



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## Masonry

Standard:		Accredited Since:
M201	Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the testing of Hydraulic Cements and Concretes	04/13/2017
T32	Brick: Absorption	04/13/2017
T32	Brick: Capping	04/13/2017
T32	Brick: Compressive Strength	04/13/2017
T32	Brick: Initial Rate of Absorption	04/13/2017
T32	Brick: Measurement	04/13/2017
T32	Brick: Specimen Preparation	04/13/2017
C67	Brick: Absorption	01/01/2011
C67	Brick: Capping	02/02/2010
C67	Brick: Compressive Strength	01/01/2011
C67	Brick: Initial Rate of Absorption	04/13/2017
C67	Brick: Measurement	01/01/2011
C67	Brick: Specimen Preparation	02/02/2010
C109	Compressive Strength of Hydraulic Cement Mortars (Using 2-in. Cube Specimens)	02/02/2010
C140 (Concrete Masonry Units)	Sampling and Testing Concrete Masonry Units and Related Units	02/02/2010
C185	Air Content of Hydraulic Cement Mortar	02/02/2010
C305	Mechanical Mixing of Hydraulic Cement Pastes and Mortars of Plastic Consistency	02/02/2010
C426	Linear Drying Shrinkage of Concrete Masonry Units	07/23/2019
C511	Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the testing of Hydraulic Cements and Concretes	02/23/2012
C1019	Sampling and Testing Grout	02/02/2010
C1314	Compressive Strength of Masonry Prisms	10/15/2014
C1437	Flow of Hydraulic Cement Mortar	02/02/2010
C1506	Water Retention of Hydraulic Cement-Based Mortars and Plasters	02/02/2010



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## Masonry (Continued)

**Standard:**

**Accredited Since:**

C1552

Capping Concrete Masonry Units, Related Units and Masonry Prisms for Compression Testing

02/02/2010