

Robert M. Henderson

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PROFESSIONAL SUMMARY

Detailed Asphalt Laboratory Technician with over 10 years of experience in high volume production environments. Proven expert in AASHTO and ASTM testing protocols, with a track record of reducing material waste by 12% through precise mix adjustments. Dedicated to maintaining 100% compliance with state DOT safety and quality regulations.

WORK EXPERIENCE

Senior Quality Control Technician | Lone Star Paving Group | Houston, TX

May 2018 - Present

- Spearheaded the Marshall and Superpave mix design programs, resulting in a 14% increase in pavement durability across 50+ local municipal projects.
- Oversaw daily quality control for three asphalt plants producing over 1 million tons of mix annually.
- Reduced laboratory operational costs by \$25,000 per year by implementing a rigorous preventative maintenance schedule for testing equipment.
- Managed a team of 4 junior technicians, providing mentorship that led to all members achieving high-level state certifications within 12 months.
- Resolved critical mix segregation issues at a major airport runway project, preventing a potential \$200k rework penalty.

Materials Laboratory Technician | Texas Department of Transportation (TxDOT) | Austin, TX

Aug 2012 - Apr 2018

- Performed over 2,000 independent compliance audits on private contractors to ensure adherence to state road construction specifications.
- Conducted advanced binder testing using Dynamic Shear Rheometers to evaluate high-temperature performance of modified asphalts.
- Achieved 100% accuracy in annual AMRL proficiency testing cycles for six consecutive years.
- Authored 150+ technical reports documenting material failures and proposing engineering solutions for district managers.
- Verified aggregate quality from 12 separate quarries, ensuring all raw materials met strict hardness and absorption criteria.

Asphalt Plant Technician | Vulcan Materials Company | San Antonio, TX

Jun 2009 - Jul 2012

- Optimized hot-mix asphalt formulas that reduced liquid asphalt cement consumption by 3% while maintaining all structural parameters.
- Facilitated the transition to Warm Mix Asphalt (WMA) technology, reducing plant fuel consumption by 11%.
- Monitored moisture levels in aggregate stockpiles daily to adjust plant burner settings, improving thermal efficiency.
- Conducted on-site density testing using nuclear gauges for residential paving projects.

EDUCATION

Texas A&M University | Bachelor of Science | Civil Engineering Technology

Aug 2005 - May 2009

Austin Community College | Associate of Applied Science | Construction Management

Aug 2003 - May 2005

SKILLS

AASHTO / ASTM Standards, Superpave Mix Design, Marshall Stability Testing, Binder Rheology, Aggregate Gradation, Equipment Calibration, Quality Control (QC), Data Analysis, Statistical Process Control, MS Excel & Laboratory Information Systems (LIMS), Site Troubleshooting, Project Management, Safety Compliance (OSHA), Technical Reporting, Contractor Relations

CERTIFICATIONS

HMA Plant Production Specialist | NAPA (2020)
Level 1A Asphalt Plant Technician | TxDOT (2010)

LANGUAGES

English (Native)
Spanish (Professional Working Proficiency)

ACTIVITIES

NAPA Annual Convention

Regular attendee and contributor to technical sessions regarding sustainable paving materials.

ASCE Roadway Innovation Committee

Volunteer member providing insights on material testing for urban infrastructure developments.