



# Rubberized Asphalt Paving & Pothole Patching

Executive Overview | September 2026

## Executive summary

Green Technology Global (GTG) turns scrap tires into rubberized asphalt pavement, pavement preservation and permanent pothole repair. The goal is fewer maintenance disruptions, longer pavement life and better life-cycle economics for private owners, contractors and infrastructure operators.

The results are field-proven: featured projects show rubberized overlays largely intact after 8 years while conventional overlays cracked, and rubberized pavement still performing after 16 years. Industry research puts rubberized asphalt at up to **twice the service life, 43% lower life-cycle cost and 34% lower CO2** than conventional asphalt.

## The problem

- **Short-lived repairs.** Conventional asphalt cracks, ruts and potholes under freeze-thaw and heavy loads, so crews return to the same spots season after season.
- **Rising costs.** Road construction costs and emissions have climbed steadily over the last 50 years.
- **Tire waste.** The U.S. holds at least 275 million stockpiled scrap tires, a long-standing landfill and fire hazard.

## The GTG solution

GTG grinds scrap tires into crumb rubber and blends it into the asphalt binder before paving, using standard hot-mix plants, pavers and compaction equipment.

- **Stress Absorbing Membrane Interlayer (SAMI).** A rubber-asphalt binder layer with seated stone chips under a new surface stops old cracks reflecting through. Uses 20–23% rubber by binder weight, about 1,500–1,700 tires per km of two-lane road.
- **Rubber-modified surface courses.** Dense-, gap- and open-graded wearing courses with 5–20% rubber by binder weight, about 500–2,000 tires per km.
- **Permanent pothole repair and preservation.** Rubber-modified repairs built to last, not seasonal cold patch. High-rubber binders show more than twice the fatigue life of conventional mix.
- **Engineering and project management.** GTG scopes the site, specifies the mix and manages delivery.

## Proven performance

| Project                                        | Result                                                                                 |
|------------------------------------------------|----------------------------------------------------------------------------------------|
| US Hwy 52 (Rivers Ave.), Charleston County, SC | Severe alligator cracking in 2019 restored to a smooth, crack-free surface by 2022     |
| I-40, conventional vs. rubberized overlay      | After 8 years, conventional overlay heavily cracked; rubberized overlay largely intact |
| Lubbock, TX SAMI                               | Still performing after 15 years                                                        |
| Rubberized roadway, long-term                  | Minimal surface distress after 16 years                                                |

## Competitive advantages

1. **Longer pavement life.** Higher crack and rut resistance and slower oxidation keep roads serviceable for 15+ years.
2. **Lower life-cycle cost.** Fewer repeat repairs cut maintenance spend; Bend, Oregon saved \$70,000 per mile resealing with recycled rubber.
3. **Stops reflective cracking.** SAMI lets owners resurface over badly cracked pavement without the cracks returning, avoiding full-depth reconstruction.
4. **Permanent pothole repair.** Replaces the patch-and-return cycle of cold patch, reducing crew call-backs and disruption.
5. **Safer roads.** Better skid resistance, less water spray, lower icing susceptibility and reduced traffic noise.
6. **No new equipment.** Standard hot-mix production, paving and compaction equipment is used, so contractors adopt it without capital outlay.

7. **Sustainability credentials.** Each lane-km diverts hundreds to thousands of tires from landfill with about 34% lower CO2, supporting ESG, LEED and grant goals.
8. **One scrap-tire partner.** GTG also turns tires into composite pallets and 50-year railroad ties, so a tire stream can be placed across several products.
9. **Relationship model.** GTG's engineering and project team stays through delivery and long-term support, not a sell-and-leave vendor.

## GTG vs. conventional at a glance

| Factor                    | Conventional asphalt / cold patch      | GTG rubberized asphalt                    |
|---------------------------|----------------------------------------|-------------------------------------------|
| Service life              | Baseline                               | Up to ~2x; 15–16 years shown in the field |
| Life-cycle cost           | Baseline                               | ~43% lower                                |
| CO2 emissions             | Baseline                               | ~34% lower                                |
| Reflective cracking       | Cracks return through overlays         | SAMI blocks reflection                    |
| Pothole repair            | Cold patch often fails within a season | Permanent rubber-modified repair          |
| Skid resistance and icing | Baseline                               | Better grip, less spray and icing         |
| Equipment                 | Standard                               | Same standard equipment                   |
| Recycled content          | Little or none                         | 500–2,000 tires per lane-km               |

*Cost, CO2 and service-life figures are published industry results for rubberized asphalt.*

## Target markets

- **Private owners:** retail and gas-station lots, HOAs and gated communities, campuses and industrial yards.
- **Contractors:** paving firms adding a rubberized SAMI and surface-course offer with existing equipment.
- **Infrastructure operators:** ports, logistics hubs, data-center campuses and toll roads with heavy loads.
- **Public agencies:** municipal pothole backlogs and DOT overlays, especially where rubberized binders are already specified.
- **Scrap-tire holders:** tire processors and facilities with a tire stream to repurpose.

## Next steps

1. **Site assessment:** GTG reviews pavement condition, traffic and pothole history.
2. **Pilot section or patch program:** a defined stretch or repair zone, tracked against a conventional control.
3. **Scale-up proposal:** life-cycle cost comparison and multi-year paving plan.

**Contact:** [amo@GreenTechnologyGlobal.com](mailto:amo@GreenTechnologyGlobal.com) | [greentechnologyglobal.com/rubber-technology](https://greentechnologyglobal.com/rubber-technology)

### Sources

[GTG Rubber Technology](#) · [GTG Rubberized Asphalt Technology Overview](#) · [Recycled Rubber Coalition](#) · [Resources, Conservation & Recycling \(2023\)](#) · [Ghabchi et al., Materials \(2021\)](#) · [FHWA HIF-20-043](#)