



# NCDOT Pavement Preservation Bulletin Materials and Tests Unit

## Chip Seal Project Inspection

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### Road Preparation

For Chip Seal (AST) to be successful: the road should be free of standing water or moisture and swept with a broom, removing dirt, leaves, and other deleterious materials. **AST applied to a dirty roadway will have bonding issues.**

### Calibration and Test Strip

Before Chip Seal paving begins, the contractor should calibrate their equipment. A 500 foot test strip is required at the start of AST projects. **Emulsion and aggregate should be uniformly applied with a salt and pepper look.** If the test section is approved, it is accepted into production.



**Pictured Above:** Salt & Pepper appearance of a Chip Seal.

### Chip Seal Paving

Once the road is prepared and the test strip is approved, production may commence. Distributor and Chip Spreader should remain in close proximity during production. **The Chip Seal should be rolled with 5 minutes of it being applied to the roadway.** The contractor should adjust application rates based on existing road conditions.



**Pictured Above:** Chip Seal Paving in Division 4.

### AST Inspector Links and Resources

- **AST 660 Form Web App**
- **AST Inspector Checklist**
- **Section 660 of NCDOT Standard Specifications**

## Troubleshooting AST Issues

As with everything in construction, ample preparation, adequate materials, and proper workmanship can nip issues in the bud before they manifest into project-wide problems.

### Potential AST Issues:

- Bleeding/Flushing (**top picture**)
- Raveling/Shelling
- Streaking/Corn Rows
- Poor Intersection Workmanship

### Most Likely Cause of AST Issues:

- Inadequate Road Preparation (**below picture**)
- Aggregate with too much dust/fine material
- Equipment Issues or Operator Error
- Failing to Adapt to Existing Road Conditions
- Incorrect Route Selection

**Contact the Pavement Preservation Team (info at the bottom of the page) if your AST Contract is exhibiting any of the these issues!**

## The Final Touches: Fog Seal

Most Chip Seals will get finished within a week or 2 with a Fog Seal. After the Chip Seal is swept, the Fog Seal, a 50:50 emulsion, is applied at a rate generally around 0.12 gallons per square yard.

**The Fog Seal secures marginally bonded stone, improving the lifespan of the Chip Seal and gives the road a darker appearance, satisfying drivers.**



**Pictured Above:** Bleeding/Flushed Chip Seal, which is worst in the wheelpath, especially under truck traffic.

**Pictured Below:** New Chip Seal with an alligator cracked area that **was not patched before paving.**



## Pavement Preservation Team Contact Info



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