

**MAINTENANCE PLANNING GUIDELINES**

01/2014

**ACTIVITY:** Roadway Shoulders  
(R225)  
**MAJOR & MINOR**

**ACTION:** Chip Seal

**DEFINITION:** The time and expenses incurred to expand installation and maintenance of asphalt concrete and aggregate roadway shoulder, approaches and clear zones.

**PURPOSE:** To seal out moisture and restore the surface of cracked and deteriorated bituminous shoulders.

**SCHEDULING:** When temperature is above 50°F, humidity is low, and no rain is forecast.

J	F	M	A	M	J	J	A	S	O	N	D
A	E	A	P	A	U	U	U	E	C	O	E
N	B	R	R	Y	N	L	G	P	T	V	C

**RECOMMENDED EQUIPMENT:**

- Asphalt Distributor(s)
- Dump Truck(s) w/Spreaders or Chip Spreaders
- Pneumatic Roller
- Broom/Sweeper
- Traffic Control Equipment;  
(See EPG [616.23 Traffic Control for Field Operations](#))

**RECOMMENDED MATERIAL:**

- Liquid Binder – Sealing Grades
- Check with Materials Office for proper selection of aggregate. ½ in. Aggregate (maximum).

**RECOMMENDED PROCEDURE:**

1. Consult with Materials Office and vendor for design and application rates.
2. Contact Dig Rite and others to mark utilities.
3. Place traffic control devices as required. Review guidance for use of “Fresh Oil” and “Loose Gravel” signs [EPG 616.23.2.7.6](#) and pavement marking [EPG 616.23.2.5.7](#)
4. Sweep the existing surface to clean and remove loose debris.
5. Check application rate for distribution of aggregate and binder depending on field specific conditions. Adjust as necessary for each job.
6. Roll immediately.
7. Excess aggregate should be swept off and removed when surface is cured.
8. Remove traffic control devices.

**SAFETY:** Care should be taken to reduce the amount of loose aggregate. Motorists should be warned to drive slowly and watch for fresh asphalt and moving equipment. Refer to the [Comprehensive Safety Program sharepoint portal](#). Wear all appropriate PPE. Refer to the [Risk Based Assessment](#) for additional information.

**OTHER CONSIDERATIONS:** May substitute lightweight aggregate to minimize vehicle damage claims. Use a pneumatic roller to improve rock retention by asphalt. It is advisable to hold a traffic control planning session prior to projects. Care should be taken to avoid shoulder build-up to ensure proper drainage.

**REFERENCES:** Missouri Standard Specifications for Highway Construction; Sections [409](#), [1003](#), [1015](#).