

Date: July 15, 2011

To: MAG Specification and Detail Committee members

From: Jeff Benedict

RE: case 11-28 section 716 "Cover material (chips)

Purpose: To bring current practices and specifications into this section.

Revisions: Minor revisions only. A better description of "pre-coat" and method. MAG sections were updated or eliminated as the references needed. Screens size and passing requirements remained the same.

SECTION 716

COVER MATERIAL

716.1 GENERAL:

Cover material “chips” shall consist of precoated or uncoated aggregate spread in conjunction with a bituminous or asphalt-rubber seal coat.

716.2 STONE CHIPS COVER MATERIAL AGGREGATE:

716.2.1 General: The stone chips shall be crushed rock as per Section 701 except as modified below.

716.2.1.2 Tests Properties:

1. ~~The chips' weight loss~~ When tested in accordance with AASHTO T 96, the loss shall not exceed 40 percent ~~of at~~ 500 revolutions ~~where tested in accordance with ASTM C 131.~~

1.

2. ~~The chips shall not show a loss in excess of 12 percent~~ When tested in accordance with AASHTO T-104 (Sodium Sulfate Soundness), the loss shall not exceed 12 percent

2.

When tested in accordance with Ariz 212,

3. ~~a~~ minimum of 75 percent, by weight, of the material; ~~by weight,~~ retained on the No. 8 sieve, shall have at least one fractured face ~~produced by the crushing operation.~~

716.2.3 Gradation: When tested in accordance with ~~ASTM AASHTO T 27 and T 11C 136 and C 117,~~ the gradation shall comply with Table 716-1 and/or Table 716-2.

TABLE 716-1	
COVER MATERIAL (CHIPS) GRADATION For Low Volume Traffic Only	
Sieve Size	Percent Passing
½ inch	100
3/8 inch	97/100
1/4 inch	70/100
#8	0-5
#200	0-2

Table 716-2	
COVER MATERIAL (CHIPS) GRADATION For High Volume Traffic	
Sieve Size	Percent Passing
¾ inch	100
½ inch	97/100
3/8 inch	70/100
1/4 inch	0-10
#8	0-5
#200	0-2

SECTION 716

716.3 PRECOATED CHIPS:

When specified, the aggregate shall be heated and precoated with asphalt cement as specified in Section 711. The quantity of bituminous material used shall not be less than 0.30 percent or greater than 0.70 percent of the combined weight of the bituminous material and the aggregate to achieve a “salt and pepper” appearance.

The final percentage of asphalt used for coating shall be as directed by the Engineer. The precoating shall be done in a drum mix hot plant. With approval of the Engineer, a pug mill mixing facility may be used for a minimum of 30 seconds or until the asphalt is present on the aggregate, which ever is greater. With approval of the Engineer, a drum mix plant may be used, however, the end result shall produce a uniform, dust free product.

716.4 UNCOATED CHIPS:

When liquid or paving grade asphalt is used as the bituminous binder, the uncoated chips shall not contain moisture in excess of a saturated surface dry condition.

When emulsified asphalt is used as the bituminous binder, the uncoated chips shall be surface wet but free from running water.

