



MARICOPA COUNTY
Department of Transportation

MEMORANDUM

Date: January 23, 2013

To: MAG Specifications and Details Committee

From: Robert Herz, MCDOT Representative

Subject: Revision to Section 321.8.6 Asphalt Concrete Overlay **Case 13-03**

PURPOSE: Obtain uniformity with Maricopa County requirements.

REVISIONS:

- Removed mix design restrictions from the specification. Asphalt overlay mix design requirements should be identified by project contract documents not within a general construction specification.
- Pavement repair was made a separate pay item. Since pavement removal and patching is a separate operation and since pavement repair requirements can vary greatly between different overlay projects, the repair of pavement defects should be a separate pay item, it should be a project cost not an overlay cost.
- Revised the pavement surface preparation items to have surface cleaning as a separately identified requirement immediately preceding the tack coat requirements.
- Added the requirement for shoulder adjustment when overlaying uncurbed roadways.

Redlined Strikeout Version:

321.8.6 Asphalt Concrete Overlay: Asphalt concrete overlay consists of the placing and compacting plant mix asphalt concrete over existing ~~asphalt concrete paving~~pavement. The ~~mix design and~~ thickness of the overlay shall be as shown on the plans or as specified in the special provisions. ~~Preliminary preparation of existing surfaces will be required except when accomplished by the Contracting Agency, and it is so stipulated in the special provisions. With the exception of those which have been preheated and remixed only, existing surfaces shall receive a tack coat.~~

~~Asphalt concrete mix aggregate gradation and percentage of asphalt binder shall be in accordance with Section 710 using a 1/2 inch Marshall Low Traffic asphalt concrete mix designation for overlay more than one and one half inch in thickness and a 3/8 inch Marshall Low Traffic asphalt concrete mix designation for overlay one and one half inch or less in thickness, unless otherwise shown or specified in the special provisions.~~

Except when ~~they have been~~the existing asphalt surface is to be preheated and remixed, pavement surfaces shall be prepared as follows:

(a) ~~Before placing asphalt concrete overlay, Areas designated for pavement repair by the contract documents (which may include severely raveled areas, severely or cracked areas, that are depressed more than 3/4 inch from the adjoining pavement shall be cut out and patched at least 48 hours prior to the resurfacing operation. over-asphalted areas, and other defects) or rough high spots shall be either milled or cut out and patched completed and approved before placing asphalt concrete overlay. Pavement repair is a separate pay item. Large shrinkage cracks shall be filled with asphalt sealing compound acceptable to the Engineer. The entire surface shall be cleaned with a power broom. Raveled areas that do not require removing shall be cleaned by hand brooming. The above are incidental, and the cost thereof shall be included in the bid items.~~

(b) Before placing asphalt concrete overlay, milling shall be done as shown on the plans or specified in the special provisions and shall be in accordance with Section 317.

(c) After pavement repairs and milling have been completed the entire surface shall be cleaned with a power broom.

(ed) After surfaces have been prepared to the satisfaction of the Engineer, they shall receive a tack coat per Section 321.4. Traffic will not be permitted to travel over surfaces which have received a tack coat. When the overlay is to extend onto ~~the a~~ concrete gutter, the gutter shall be thoroughly cleaned of loose dust and cement particles and shall be tack coated.

Asphalt concrete overlay shall be placed as specified in Section 321.8.1 and compacted as specified in Section 321.8.4. The surface smoothness shall meet the tolerances specified in Section 321.8.5.

Manholes ~~and tops of valve boxes, clean-outs and other existing structures~~ shall be ~~built up and the frames~~adjusted to set flush with the finished surface of the new paving, ~~and tops of valve boxes, clean outs and other existing structures shall be adjusted to finish grade. In the event the base course and original paving~~During adjustment if ~~pavement or base materials have been~~are removed or disturbed in order to build up the manhole, they shall be replaced with approved materials ~~which shall be thoroughly compacted~~installed in a manner acceptable to the Engineer. ~~The asphalt concrete around the manhole frame shall be completed and made flush with the adjacent overlay.~~

On roads without curb and gutter, the existing unpaved shoulder elevation shall be adjusted by the Contractor to match the elevation at the edge of the new overlay and slope away from the new pavement surface at a rate that the existing quantity of shoulder material will allow. Shoulder material shall be compacted to a minimum of 95% of maximum density, determined in accordance with section 301.3. Shoulder adjustment to match the new pavement surface elevation shall not be measured. The cost of shoulder adjustment shall be included in the price paid for the asphalt concrete overlay or other related pay items. When the Engineer determines an insufficient amount of material is available for shoulder adjustment, the Engineer may require the Contractor to provide additional material. Acceptable material for shoulders includes the existing shoulder material, millings, untreated base materials, or a granular material approved by the Engineer. Engineer requested imported material for shoulder adjustment is not included in the price paid for the asphalt concrete overlay.

Proposed changes in final form:

321.8.6 Asphalt Concrete Overlay: Asphalt concrete overlay consists of the placing and compacting plant mix asphalt concrete over existing pavement. The mix design and thickness of the overlay shall be as shown on the plans or as specified in the special provisions.

Except when the existing asphalt surface is to be preheated and remixed, pavement surfaces shall be prepared as follows:

- (a) Areas designated for pavement repair by the contract documents (which may include severely raveled areas, severely cracked areas, over-asphalted areas, and other defects) shall be completed and approved before placing asphalt concrete overlay. Pavement repair is a separate pay item.
- (b) Before placing asphalt concrete overlay, milling shall be done as shown on the plans or specified in the special provisions and shall be in accordance with Section 317.
- (c) After pavement repairs and milling have been completed the entire surface shall be cleaned with a power broom.
- (d) After surfaces have been prepared to the satisfaction of the Engineer, they shall receive a tack coat per Section 321.4. Traffic will not be permitted to travel over surfaces which have received a tack coat. When the overlay is to extend onto a concrete gutter, the gutter shall be thoroughly cleaned of loose dust and cement particles and shall be tack coated.

Asphalt concrete overlay shall be placed as specified in Section 321.8.1 and compacted as specified in Section 321.8.4. The surface smoothness shall meet the tolerances specified in Section 321.8.5.

Manholes and tops of valve boxes, clean-outs and other existing structures shall be adjusted to set flush with the finished surface of the new paving. During adjustment if pavement or base materials are removed or disturbed, they shall be replaced with approved materials installed in a manner acceptable to the Engineer.

On roads without curb and gutter, the existing unpaved shoulder elevation shall be adjusted by the Contractor to match the elevation at the edge of the new overlay and slope away from the new pavement surface at a rate that the existing quantity of shoulder material will allow. Shoulder material shall be compacted to a minimum of 95% of maximum density, determined in accordance with section 301.3. Shoulder adjustment to match the new pavement surface elevation shall not be measured. The cost of shoulder adjustment shall be included in the price paid for the asphalt concrete overlay or other related pay items. When the Engineer determines an insufficient amount of material is available for shoulder adjustment, the Engineer may require the Contractor to provide additional material. Acceptable material for shoulders includes the existing shoulder material, millings, untreated base materials, or a granular material approved by the Engineer. Engineer requested imported material for shoulder adjustment is not included in the price paid for the asphalt concrete overlay.