

Proposed Revision To: ☒ Standard Specifications For Public Works Construction ☐ Standard Plans For Public Works Construction	Change No. 327 SM (ASSIGNED BY GREENBOOK COMMITTEE)
Public Works Standards, Inc. c/o Associated General Contractors of California Los Angeles District Office 1906 West Garvey Avenue, Suite No. 100 West Covina, California 91760	Date Proposal Received 9/14/22 (ASSIGNED BY GREENBOOK COMMITTEE)
Subsection or Standard Plan to be revised:	
On page(s): 97, 105, 110	

Warning: Public Contract Code §3400 prohibits any local agency specification that limits bidding, directly or indirectly, to any one specific concern or product. If this revision describes a proprietary or patented product, it must identify other products which equally perform the functions of the proprietary or patented product.

Revision:

203-6 ASPHALT CONCRETE.

203-6.1 General. Asphalt concrete shall be the product of mixing mineral aggregate and up to 25 percent reclaimed asphalt pavement (RAP) with asphalt binder at a central mixing plant. Asphalt concrete may be produced using a warm mix asphalt (WMA) technology.

When so specified in the Special Provisions, asphalt concrete may contain greater than 25 percent RAP ~~and/or be produced using a warm mix asphalt (WMA) technology.~~

Unless otherwise specified in the Special Provisions or shown on the Plans, asphalt concrete mixtures shall conform to 203-6.4.

203-6.7.2 Warm Mix Asphalt (WMA) Technologies. Asphalt concrete mixtures may be produced using a WMA technology ~~if so specified in the Special Provisions.~~

The WMA technology and mixing and placement temperatures shall be as specified on the approved mix design.

The plant shall be equipped or modified as necessary to produce warm mix asphalt in accordance with the WMA technology supplier's recommendations and the approved mix design.

203-11 ASPHALT RUBBER HOT MIX (ARHM).

203-11.1 General. Asphalt Rubber Hot Mix shall consist of a mixture of paving asphalt, asphalt modifier, crumb rubber modifier (CRM), and aggregate mixed in a central mixing plant. Asphalt Rubber Hot Mix may be produced using a warm mix asphalt (WMA) technology.

302-5.9 Placement.

302-5.9.1 General.

Asphalt concrete shall be deposited directly into the hopper of the paving machine. If approved or specified, the Contractor may utilize bottom dump trucks to deposit asphalt concrete into a uniformly-sized windrow, then pick up the material and convey it to the paving machine by attachment and operation of a windrow elevator and conformance with the following:

- a) The windrow may be deposited no more than 2 truck-loads ahead of the paving machine.
- b) The internal temperature of the ~~material~~ Asphalt Concrete in the windrow shall not fall below 270°F (132°C). The internal temperature of the Asphalt Concrete with a WMA technology in the windrow shall not fall below 250°F (121°C). Lower temperatures may be used if approved by the engineer.
- c) Allowable windrow lengths may be increased if approved by the Engineer, but the windrow shall not block intersections prior to the arrival of the paving machine.
- d) A skip or skid-steer loader shall be on the Work site to remove any windrowed material not meeting the temperature requirement or which will overload the paving machine hopper.

The surface temperature of the asphalt concrete mixture directly behind the paving machine, before the breakdown roller, shall not be lower than 270°F (132°C) or higher than 320°F (160°C). The surface temperature of the asphalt concrete mixture with a WMA technology directly behind the paving machine, before the breakdown roller, shall not be lower than 240°F (115°C) or higher than 320°F (160°C). Lower temperatures may be used if approved by the engineer.

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302-9.9.1 General. ~~Placement shall conform to 302-5.9.1 except that at the time of delivery to the Work site, the temperature of the ARHM shall be between 300°F (149°C) and 330°F (166°C), and ARHM shall be placed in one course as shown in Table 302-9.3. When the atmospheric temperature is above 85°F (29°C), the temperature of the ARHM at the time of delivery to the Work site may be reduced to 290°F (143°C) if approved by the Engineer.~~

Placement shall conform to 302-5.9.1 with the following exceptions:

- a) At the time of delivery to the Work site, the temperature of the ARHM shall be between 300°F (149°C) and 330°F (166°C). The temperature of the ARHM with a WMA technology shall be between 280°F (138°C) and 330°F (166°C).
- b) ARHM shall be placed in one course as shown in Table 302-9.3.
- c) When the atmospheric temperature is above 85°F (29°C), the temperature of the ARHM at the time of delivery to the Work site may be reduced to 290°F (143°C).
- d) The surface temperature of the asphalt concrete mixture directly behind the paving machine, before the breakdown roller, shall not be lower than 270°F (132°C) or higher than 320°F (160°C). The surface temperature of the ARHM with WMA technology directly behind the paving machine, before the breakdown roller, shall not be lower than 260°F (127°C) or higher than 320°F (160°C). Lower temperatures may be used if approved by the engineer.

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Reason For Revision:

This change would allow the contractor to utilize warm Mix Asphalt (WMA) technologies in asphalt mixes at their discretion. This provides the contractor with the utilization of existing technologies to ensure proper placement of asphalt concrete. Contractors will have the ability to utilize WMA technologies to improve the construction of asphalt pavements, especially when low ambient temperatures, long hauls, and/or increased recycled content are encountered.

This specification change would align the Greenbook Standard Specifications with the Caltrans specifications in allowing contractors the option to include a WMA technology in an asphalt mixture and the temperatures of the mixture during placement.

Caltrans included the contractor option specification language to include WMA in asphalt mixtures as part of their 2015 Standard Specifications. This followed a nearly 10-year research and field

evaluation effort in California and the rest of the USA.

Specifications allowing the use of WMA at the contractor's discretion is utilized by the majority of California agencies, the FHWA, the FAA, and 44 State DOTs. In the 2024 annual survey conducted by the National Asphalt Pavement Association (NAPA), WMA is used in over 40% of ALL asphalt mixtures placed in the United States. Pavement research typically includes WMA in the control section of their field evaluations.

Instructions: Use a separate form for each revision. Attach plain paper if more space is needed. For minor changes, copy present wording striking out words to be deleted and underlining new text. For major changes, rewrite or add paragraph or sections. All proposed revisions must include the reason(s) for the revision.

Subcommittee Action: On 03/17/26
(Date)

☒ Recommended For 2027 Supplement/Edition

☐ Rejected

☒ As Modified

Editorial Standards Subcommittee Review:

On 05/19/2026
(Date)

☐ Reviewed For Surf/Und/Spec/Plans Subcommittee

☐ NO Modifications

☒ As Modified

Greenbook Committee Action:

On 07/16/2026
(Date)

☒ Approved For

2027 Greenbook

Supplement/Edition

☐ As Modified

☐ Rejected