

Proposed Specification Revisions September 2014

The CAS Bureau is proposing revisions to 7 Standard Specifications. These proposed revisions will be out for comment during the month of September, 2014.

1. 102.03 Contractor Registration
2. 206.03.2 Design
3. 403.02 Crack Sealant Material
4. 403.03.4 Sealing
5. 551.03.8 Testing and Acceptance of Concrete
6. 707.01 Concrete Joint Fillers

102.03 CONTRACTOR REGISTRATION

Montana law requires all contractors, [except those exempted by MCA 39-9-211](#), to register with the Montana Department of Labor & Industry.

206.03.2 Design

B. Structures. If a bridge is chosen as means for conveyance of the waterway, provide a waterway opening of sufficient size to accommodate the 2-year flood event, spanning the active channels with 1-foot (305 mm) minimum freeboard. Construct all temporary bents in a manner that the current remains un-deflected. Provide adequate bulkheads at the approach fills to prevent fill materials from entering the waterway.

Provide the detour bridge with a width greater than or equal to that of the existing bridge, with a design load capacity of AASHTO HS-20 (MS-18). Provide a rail system with blunt end protection at all bridge ends. Ensure the approach rail system meets either NCHRP 350 or MASH crash test requirements in accordance with Table 206-1. Ensure the bridge rail can resist railing design forces as specified in the AASHTO LRFD (Table A13.2-1) for the detour design speed in accordance with Table 206-1.

TABLE 206-1
BRIDGE RAIL DESIGN

<u>Design Speed</u>	<u>Bridge Rail</u>	<u>Approach Rail Elements</u>
<u>≤ 30 mph</u>	<u>TL-1</u>	<u>TL-1</u>
<u>> 30 mph – 45 mph</u>	<u>TL-1</u>	<u>TL-2</u>
<u>> 45 mph</u>	<u>TL-2</u>	<u>TL-3</u>

Deleted: meets

Deleted: TL-1

Deleted: or

Deleted: TL-1

Formatted: Font: Bold

Formatted: Centered

Formatted Table

403.02 MATERIALS

A. Crack Sealant. Use a sealant that is listed on the QPL and in accordance with [Subsection 707.01](#).

403.03.4 Sealing

Install backer rod in cracks 1½-inch (38 mm) wide and larger. Place sealant material as soon as practicable after the routed cracks are deemed clean and dry. [Place sealant material within 24 hours of routing](#).

Deleted: Table 403-1

Deleted: TABLE 403-1¶
CRACK SEALANT SPECIFICATIONS¶
Property

Deleted: Submit a 30 pound (13.6 kg) sample for the first lot of the sealer proposed for project use to the Helena Materials Bureau for testing at least 20 calendar days before its intended application. Submit the sample in its original packaging with the batch number legible.¶
Do not use the first lot of sealant before it is approved.¶

Deleted: The Department will may take additional 1 random samples from each additional lot for testing.¶

Deleted: Do not rout further than sealant can be placed during the same day's shift

551.03.8 Testing and Acceptance of Concrete

B. Acceptance of Concrete.

1. Classes General, Deck, Pave, Structure, Overlay and Drilled Shaft Concrete.

b. Air Content. Concrete air content will be determined in accordance with MT 102 or ASTM C457 on the same sample used to make the compression test cylinders for acceptance and on samples taken according to MT 601. ~~A~~ separate air content pay factor will be computed for each test result and the lot air content pay factor will be the average of the individual test result pay factors. The pay factor for each lot based on air content is determined from the following table:

Deleted: The lot acceptance air content is the average of all the test results for the lot. In cases where the measured air content within a lot varies by more than 2.5 percentage points, a

**TABLE 551-6
AIR CONTENT PAY FACTORS**

Lot Acceptance, Air Content			
Classes General, Pave, Deck, Overlay, and Structure Concrete		Used when mix design incorporates ≥ 1½-inch nominal maximum aggregate gradation	
Air content, x (%)	Air content pay factor, PF _{AC}	Air content, x (%)	Air content pay factor, PF _{AC}
x ≥ 5.5%	PF _{AC} = 1.0	x ≥ 4.5%	PF _{AC} = 1.0
5.5% > x ≥ 4.5%	PF _{AC} = 1.0 - 0.1(5.5 - x)	4.5% > x ≥ 4.0%	PF _{AC} = 1.0 - 0.2(4.5 - x)
4.5% > x ≥ 3.0%	PF _{AC} = 0.9 - 0.6(4.5 - x)	4.0% > x ≥ 2.5%	PF _{AC} = 0.9 - 0.6(4.0 - x)
3.0% > x	Remove and Replace	2.5% > x	Remove and Replace

- Deleted: $\frac{0.20(4.5-x)}{0.5}$
- Deleted: 25
- Deleted: 5
- Deleted: 3.0
- Deleted: 80
- Deleted: $\frac{0.80(4.0-x)}{1.0}$
- Deleted: 75
- Deleted: 75
- Deleted: 5
- Deleted: 3.0

707.01 JOINT FILLERS

Deleted: CONCRETE

707.01.1 Pavement

Deleted: Concrete

- A. **Expansion Joint Filler.** Furnish expansion joint filler Type II cork in accordance with AASHTO M 153.
- B. **Joint Sealing Material.** Furnish sealing material for all types of pavement joints that is a hot-poured thermoplastic rubber or rubber asphalt compound in accordance with [ASTM D6690](#), furnished in one grade only. Use ready-mixed, cold applied joint fillers for sealing concrete pavement joints only with the Project Manager's prior written approval.

Deleted: AASHTO M 324