

Leaveout

In New Mexico we converted to 31" Midwest Guardrail System (MGS) in 2011. Our standard drawing requires a layer of asphalt or concrete (usually referred to as a "mow strip") placed to address drainage, soil erosion, or retard vegetation growth around Guardrail posts. Fourth Edition of the AASHTO Roadside Design Guide (RSDG) recommends the use of Leave-Outs in this layer. It has been a tough battle with Contractors and our maintenance crew with this migration.

Finally we put a presentation together with the help of Associated General Contractors to clarify the requirements. We communicated the use of a grout fill to achieve compressive strength of less than 120 PSI as recommended by RSDG. They see an issue with this requirement. Although, their project submittals shows 120 PSI, our folks are not convinced they are meeting this requirement.

Here are my questions :

If you have moved to 31" guardrail, do you use leave-out?

Do you have a leave-out material that meets maximum of 120 PSI requirement?

Do you have testing procedures established for leave-out compressive strength?

State	Guardrail status	31" implementation	Mow strip	Use of Leaveout	Std drawing	Leaveout Testing
Kentucky	Not 31"	implement by end of 2107	NA	NA	NA	NA
New Hampshire	Not indicated		Not used	Not used	NA	NA
Oregon	31"	Being used	Yes	Yes 120 PSI	Yes	Not tested
Kansas	31"	Being used	Yes	Yes Circular or rectangular	Yes	Section 844 - Slurry Grout
Massachuset	Not 31"	End of Calender year	Not used use Pavement milling mulch	Not called for	NA	NA
Wisconsin	31"	Being used	Yes	Yes	http://wisconsin.gov/rdwy/sdd/sd-14B28.pdf#sd14B28	http://wisconsin.gov/rdwy/sdd/spec/ss-06-14.pdf#ss614
Delaware	Not used	Not used	NA	Not used	NA	NA
New Jersey	Not indicated	NA	Yes	Porous non-vegetative surface	NA	NA
New York	Not indicated	NA	Yes 3" thickness	Not used	NA	NA
Louisiana	Not used yet	June of 2017	Yes	Yes	Not yet	Contact material lab, other option besides grout available
Utah	31"	Being used	Yes	Yes	Yes	http://www.udot.utah.gov/main/uconowner.gf?n=31730316757114651
Virginia	31"	Implemented in Feb 2017	NA	NA	NA	NA
Michigan	31"	Being used	Not used	Yes for paved surfaces see subsection 7.01.33.D (Chapter 7)	http://mdotcf.state.mi.us/public/design/englishroadmanual/	no refer to section B of special provision

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California	31"	http://www.dot.ca.gov/hq/esc/oe/project_plans/highway_plans/stdplans_US-customary-units_15/viewable_pdf/a77n5.pdf	Yes	Yes see next cell for link to special provision (SSP) 83-2.01B	http://www.dot.ca.gov/hq/esc/oe/construction_contract_standards/SSPs/2015-SSPs/division_9/83-2.01B_A10-30-15_2015.docx	Yes. SSP 83-2.01B refers to ASTM D1621
Florida	31"	being used	various options are shown for paved and unpaved and concrete section	Shown in concrete	http://www.fdot.gov/roadway/DS/18/IDx/00400.pdf	http://www.fdot.gov/programmanagement/Implemented/SpecBooks/July2017/Files/121-717.pdf
Georgia	31"	Being used	Yes	Yes	STD drawing 4381 and 2016 Supplemental Specification 641	Specification 600
New Mexico	31"	Being used	Yes- Mnadatory	Yes on all pavement material. Our standard drawing and special provision reads the following for the material: <i>Use base course to total depth of 3". Tamp manually and top with emulsion material., applied to the entire surface area of the leaveout.</i>	STD 606	Not required