

FULLY TESTED & AVAILABLE

Texas A&M Transportation Institute
Proving Ground

Test Report No. 690900-JJH11
Test Report Date: January 2018

MASH TEST 3-10 OF THE EASI-SET J-J HOOKS® FREE-STANDING PORTABLE CONCRETE BARRIER

by
Nauman M. Sheikh, P.E.
Associate Research Engineer
Wanda L. Menges
Research Specialist
and
Darrell L. Kuhn, P.E.
Research Specialist



Contract No.: 1708145
Test No.: 690900-JJH11
Test Date: 2017-11-13

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EASI-SET Worldwide

Texas A&M Transportation Institute
Proving Ground

Test Report No. 690900-JJH10
Test Report Date: January 2017

MASH TEST 3-11 OF THE EASI-SET MASH FREE-STANDING BARRIER

by
Nauman M. Sheikh, P.E.
Associate Research Engineer
Wanda L. Menges
Research Specialist IV
and
Darrell L. Kuhn, P.E.
Research Specialist



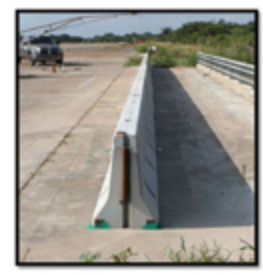
Contract No.: 1700967
Test No.: 690900-JJH10
Test Date: 2016-11-10

Texas A&M Transportation Institute
Proving Ground

Test Report No.: 510602-JJH9
Test Report Date: August 2012

MASH TEST 3-11 ON THE EASI-SET® INDUSTRIES J-J HOOKS/MASH PROPRIETARY BOLT-DOWN BARRIER SYSTEM

by
Roger P. Bligh, P.E.
Research Engineer
and
Wanda L. Menges
Research Specialist



Contract No.: P2012310
Test No.: 510602-JJH9
Test Date: 2012-06-05

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TEXAS A&M TRANSPORTATION INSTITUTE PROVING GROUND

Mailing Address: Roadside Safety & Physical Security, Texas A&M University System, 3135 TAMU, College Station, TX 77843-3135
Located at: Texas A&M Riverside Campus, Building 7001, 3100 State Highway 47, Bryan, TX 77807

Texas A&M Transportation Institute
Proving Ground

Test Report No. 510602-JJH8
Test Report Date: August 2012

MASH TEST 3-11 ON THE EASI-SET® INDUSTRIES J-J HOOKS/MASH PROPRIETARY BARRIER PINNED TO ASPHALT

by
Roger P. Bligh, P.E.
Research Engineer
and
Wanda L. Menges
Research Specialist



Contract No.: P2012309
Test No.: 510602-JJH8
Test Date: 2012-06-06

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TEXAS A&M TRANSPORTATION INSTITUTE PROVING GROUND

Mailing Address: Roadside Safety & Physical Security, Texas A&M University System, 3135 TAMU, College Station, TX 77843-3135
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J-J Hooks®
Safety Barriers

MASH Crash Tested & Ready To Use



Pin-Down Crash Test w/ 36" Deep Cut

J-J Hooks® Safety Barriers

J-J Hooks MASH designs are available for highway use two years ahead of the AASHTO/FHWA sunset date for NCHRP 350 tested products.



5119 Catlett Road, Midland, VA 22728
(800) 547-4045 • info@easiset.com
JJHooks.com • EasiSet.com

The Only 2-Bolt (in concrete) or 3-Pin (in asphalt) Restrained Barrier System



EASI-SET BARRIERS MEETING CRITERIA SET FORTH IN MASH



WHAT YOU NEED TO KNOW

“Excerpts from published AASHTO/FHWA Guidance”

1. The AASHTO'S TCRS (American Association of State Highway & Transportation Officials – Technical Committee on Roadside Safety) will continue to be responsible for developing and maintaining the evaluation criteria as adopted by AASHTO. Source - https://safety.fhwa.dot.gov/roadway_dept/countermeasures/reduce_crash_severity/docs/memo_joint_implementation_agmt.pdf
2. Final decisions on selection and modifications to devices will be at the State DOT and local level. Source- https://safety.fhwa.dot.gov/roadway_dept/countermeasures/reduce_crash_severity/openletter052617.cfm
3. FHWA's (Federal Highway Administration) Federal-aid Eligibility Letters are provided as a service to the States and are not a requirement for roadside safety hardware to be eligible for Federal-aid reimbursement. Source - https://safety.fhwa.dot.gov/roadway_dept/countermeasures/reduce_crash_severity/docs/memo_joint_implementation_agmt.pdf
4. Laboratory crash tests cannot account for all of the variables and situations drivers may encounter. FHWA continues to encourage States to perform in-service performance evaluations to identify real world performance of hardware, so all stakeholders have a more comprehensive understanding of these devices' performance. Source - https://safety.fhwa.dot.gov/roadway_dept/countermeasures/reduce_crash_severity/openletter052617.cfm
5. Temporary work zone devices, including portable barriers, manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH (Manual for Assessing Safety Hardware). Such devices manufactured on or before that date, and successfully tested to NCHRP (National Cooperative Highway Research Program) Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Source - https://safety.fhwa.dot.gov/roadway_dept/countermeasures/reduce_crash_severity/docs/memo_joint_implementation_agmt.pdf
6. Non-significant modifications are modifications to a crashworthy device that do not lead to reduced performance and, instead, provide equal or better performance. Where an engineering analysis clearly shows that the proposed modification will have a non-significant effect, then finite element analysis (FEA) is not needed. Where there is some uncertainty about the performance, FEA can help determine if the effect is significant or not. If FEA determines the effect is significant, full scale crash testing is required for an FHWA Federal-aid reimbursement Eligibility Letter. Additional guidance can be found at the FHWA's Office of Safety website under Q&A: http://safety.fhwa.dot.gov/roadway_dept/policy_guide/road_hardware/links Source - https://safety.fhwa.dot.gov/roadway_dept/countermeasures/faqs/docs/aqs_mash_implementation_agrmt.pdf



PERFORMANCE & INSTALLATION CHOICES

AVAILABLE	AASHTO CRASH TESTED			
	Free-standing	Free-standing	Bolted to Concrete (2-Bolts)	Pinned to Asphalt (within 6" of a Vertical Cut)
Barrier Installation Type	Free-standing	Free-standing	Bolted to Concrete (2-Bolts)	Pinned to Asphalt (within 6" of a Vertical Cut)
AASHTO Crash Test Spec.	NCHRP 350	MASH	MASH	MASH
Test Level 3	✓	✓	✓	✓
Deflection (dynamic/static)	51"/51"	64.2"/63"	5.9"/4"	8.76"/5.5"
FHWA Eligibility Letter	B52	B300	B52B	B52C



A full suite of MASH TL3 tested designs to meet a wide range of roadway installation requirements – free-standing, pinned, bolted.