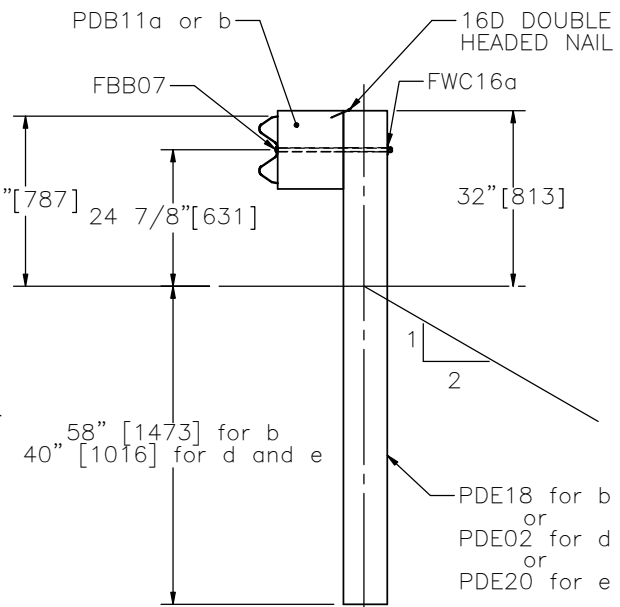


SECTION A-A
SGR38a or SGR38c
STEEL-POST OPTION



SGR38b or SGR38d or SGR38e
WOOD-POST OPTION

MASH TL-3 MGS ADJACENT TO 2H:1V FILL SLOPE



SGR38a-e

SHEET NO.

DATE:

1 of 3

12/5/2016

INTENDED USE

The Midwest Guardrail System (MGS) placed adjacent to a 2H:1V slope with standard post spacing can use wide-flange steel posts (PWE08 or PWE06) as well as timber posts (PDE18 or PDE02 or PDE20). The MGS adjacent to a 2H:1V fill slope with standard post spacing and 9' [2743] posts (PWE08) or 7½" [2146] wood posts (PDE18) should be used where a maximum dynamic deflection of 57.6" [1463] or less is acceptable and where a minimum working width of 64.2" [1631] is provided. Another option for the MGS adjacent to a 2H:1V fill slope would be utilizing 6' [1829] posts at standard post spacing. This option for the MGS adjacent to 2H:1V fill slope should be used where a maximum dynamic deflection of 72.9" [1852] or less is acceptable and where a minimum working width of 77.4" [1966] is provided. The MGS adjacent to a 2H:1V fill slope should be anchored and terminated using a suitable guardrail end treatment that is acceptable with a 31" [787] top mounting height. The MGS adjacent to a 2H:1V fill slope has been tested under Test Level 3 (TL-3) conditions and deemed crash-worthy according to the Manual for Assessing Safety Hardware (MASH) performance criteria.

COMPONENTS

Unit Length = 150" [3810]

DESIGNATOR	COMPONENT	SYSTEM	NUMBER
FBB01	Guardrail splice bolts and nuts	a-e	8
FBB06	Guardrail post bolts and nuts	a,c	2
FBB07	Guardrail post bolts and nuts	b,d,e	2
FWC16a	Round washer	b,d,e	2
PDB10a or b	MGS timber blockout for steel posts	a,c	2
PDB11a or b	MGS timber blockout for timber posts	b,d,e	2
PWE08	Wide-flanged guardrail post	a	2
PDE18	Timber guardrail post	b	2
PWE06	Wide-flange guardrail post	c	2
PDE02	Timber guardrail post	d	2
PDE20	White pine guardrail post	e	2
RWM04a	W-beam rail	a-e	1
----	16D nail, galvanized	a,c	2*

*When using built up blockout option, four will be required.

ELIGIBILITY

For 9' [2743] steel posts: FHWA Eligibility Letter B-211, June 10, 2011.

For 7½" [2146] Southern Yellow Pine (SYP) posts: FHWA Eligibility Letter B-211A, June 10, 2011.

For 6' [1829] steel posts: FHWA Eligibility will be pursued.

For 6' [1829] SYP and White Pine (WP) posts: FHWA Eligibility will be pursued.

MASH TL-3 MGS ADJACENT TO 2H:1V FILL SLOPE



SGR38a-e

SHEET NO.

DATE:

2 of 3

12/5/2016

REFERENCES

Wiebelhaus, M.J., Lechtenberg, K.A., Faller, R.K., Sicking, D.L., Bielenberg, R.W., Reid, J.D., Rohde, J.R., Dey, G., Development and Evaluation of the Midwest Guardrail System (MGS) Placed Adjacent to a 2:1 Fill Slope, Research Report No. TRP-03-185-10, Midwest Roadside Safety Facility, University of Nebraska-Lincoln, February 24, 2010.

McGhee, M.D., Lechtenberg, K.A., Bielenberg, R.W., Faller, R.K., Sicking, D.L., Reid, J.D., Dynamic Impact Testing of Wood Posts for the Midwest Gaurdrail System (MGS) Placed Adjacent to a 2H:1V Fill Slope, Research Report No. TRP-03-234-10, Midwest Roadside Safety Facility, University of Nebraska-Lincoln, December 16, 2010.

Lechtenberg, K.A., Bielenberg, R.W., Faller, R.K., Reid, J.D., and Hasse, A.J., Midwest Guardrail System (MGS)with 6-ft Posts Placed Adjacent to a 2H:1V Fill Slope, Research Report No. TRP-03-320-15, Midwest Roadside Safety Facility, University of Nebraska-Lincoln, 2015.

CONTACT INFORMATION

Midwest Roadside Safety Facility
Nebraska Transportation Center
University of Nebraska-Lincoln
130 Whittier Research Center
2200 Vine Street
Lincoln, NE 68583-0853
(402) 472-0965
Email: mwrfsf@unl.edu
Website: <http://mwrfsf.unl.edu/>

MASH TL-3 MGS ADJACENT TO 2H:1V FILL SLOPE



SGR38a-e

SHEET NO.

DATE:

3 of 3

12/5/2016