GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.
SEE S.D.D. 14 B 42 FOR MORE DETAILS.

1. FLANGE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLANGE REQUIRED.

2. HINGE POINT SHOWN ON DRAWING.

3. MIDWEST GUARDRAIL SYSTEM (L) TWO-WAY TRAFFIC

DEPARTMENT OF TRANSPORTATION
STATE OF WISCONSIN
GENERAL NOTES

POEMS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.
SEE SDD 14 B 43-4b FOR MORE DETAILS.

1. FLARE FOR MGS END SHOWN. IF INSTALLING MGS NO FLARE NEEDED.
2. VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH, SHORTER
   LENGTHS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE
   INFORMATION.

DEPARTMENT OF TRANSPORTATION
STATE OF WISCONSIN

ALL OTHER POSTS SHALL BE WOOD OR STEEL.
POSTS 1 THROUGH 3 ARE CRT POSTS.

ELEVATION VIEW

SECTION OF TRAVEL

PLAN VIEW

SECTION OF TRAVEL

ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) ONE-WAY TRAFFIC

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
References:

Standard Spec 614  
FDM 11-45-30  
SDD 14B42  
AASHTO Roadside Design Guide  
MwRSF Report TRP-03-187-07

Bid items associated with this drawing:

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<td>Salvaged Guardrail End Treatments</td>
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<td>Replacing Guardrail Posts and Blocks</td>
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Standardized Special Provisions associated with this drawing:

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Other SDDs associated with this drawing:

- SDD 14B28: Guardrail Mow Strip  
- SDD 14B42: Midwest Guardrail System  
- SDD 14B44: Midwest Guardrail System Terminal EAT (MGS)  
- SDD 14B45: Midwest Guardrail System Transitions (MGS)  
- SDD 14B47: Midwest Guardrail System Type 2 terminal (MGS)

Design Notes:

Midwest guardrail System L (MGS L) is a specially designed semi-rigid barrier system. MGS L is designed to span over drainage structures, box culverts and underground obstructions. Maximum span length (i.e. distance between post 1 to post 1) is shown on front side of this SDD. Smaller spans between post 1 to post 1 may be used. Document span length in plans.

Provide working width for MGS L. Working width for MGS L is 94 inches from front face of rail to front of fixed object. If working width cannot be provided provide documentation within DSR.

Top of a box culvert or other drainage structure’s header is flush or below shoulder elevation at the back of post 1. If header is above this elevation it may snag or trip errant vehicle during impact or redirection.

Individual construction detail drawings are required (See FDM 11-30.3.1.4). Post embedment, post location, and grading near post are critical design features. Front sides of SDD show minimum layout of standard MGS upstream and downstream of MGS L. Installing shorter lengths of standard MGS upstream or downstream may impair the function of MGS L. For example on “sheet b”, 62 feet and 6 inches of MGS L and MGS, measured from post 3, is required on the downstream end of the box culvert. Reducing grading near MGS L will degrade performance.

MGS L was not designed to be directly connected to stiffer or more flexible semi rigid barriers.

There are other crashworthy options to span beam guard over a drainage structure or box culvert. Coordination with the Bureau of Project Development, Bureau of Structures and Regional Maintenance is required. MGS may have to be connected to drainage structure or box culvert. Connecting MGS to a drainage structure or box culvert requires structural analysis, discussion with maintenance staff, and additional design effort. Special provisions and special details may be required. BPD recommends that this coordination is done early in the design or scoping process.
Another option would be to use a different barrier system to span over a drainage structure, box culvert, or underground obstruction. For an example, a single slope concrete barrier could be installed over a shallow fill culvert.

Do not install curb and gutter in front of or below rail when using MGS type L. MGS L may use grading and shaping items. See SDD 14B42 for additional guidance.

Contact Person:

Erik Emerson (608) 266-2842