



2005

Box Beam Bursting Energy Absorbing Terminal (BEAT)



Road Systems Inc.

SEB05

SHEET NO.

DATE:

1 of 2

8-16-05

INTENDED USE

The **BEAT** (Box Beam Bursting Energy Absorbing Terminal) is a roadside energy-absorbing terminal that is supported by one steel breakaway end post and standard 3" x 5.7# (75 x 8.5) I beam weak posts and is used to protect the ends of 6" x 6" (150 x 150) box beam barriers. The BEAT is 14 feet (4.3m) long. The additional energy absorbing capacity is achieved as the impact head activates the standard downstream box beam sections.

During end-on impacts, the vehicle forces the mandrel portion of the BEAT impact head into the end of the box beam section causing the tube to burst. The four walls of the tube are then peeled back. The end tube wall thickness is 1/8" (3mm), which is thinner than the 3/16" (5mm) downstream box beam.

The BEAT is a cable-anchored system. When impacted on the traffic side within the length of need and within design limits, the BEAT contains and redirects the errant vehicle back toward its original travel path. A gusset plate is welded to the end tube section to anchor the downstream end of the cable. The cable is bolted into place for traffic face redirection impacts. The tension in the cable is released for end-on impacts when breakaway post #1 is fractured.

APPROVALS

FHWA approval (CC-69) November 9, 2000 - BEAT NCHRP 350 Test Level 3

CONTACT INFORMATION

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