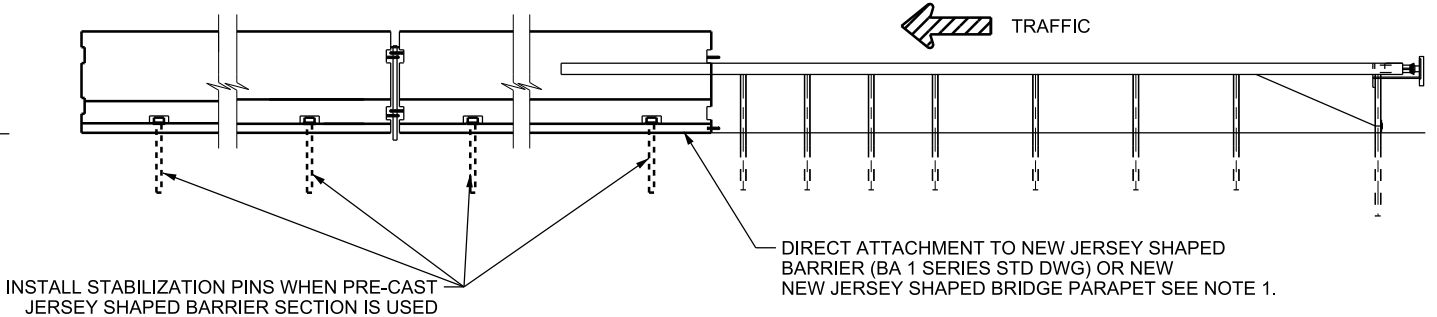


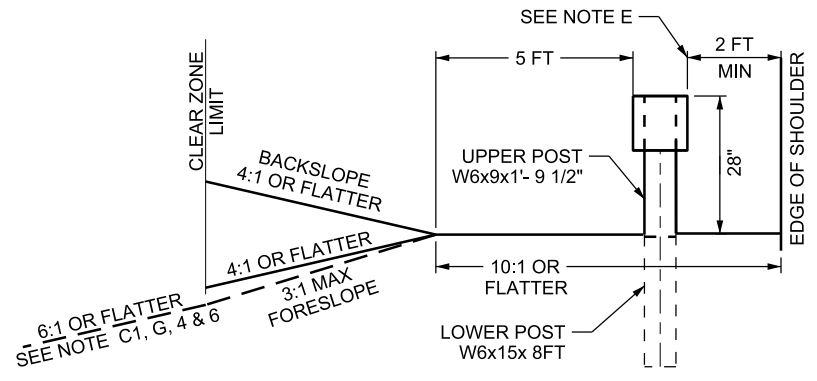
**DETAIL WHEN SYSTEM IS INSTALLED WITH CONSTANT SLOPE BARRIER**

(GROUND MOUNTED POST SHOWN, SURFACE MOUNTED STEEL BREAKAWAY POST ACCEPTABLE, SEE NOTE 3)

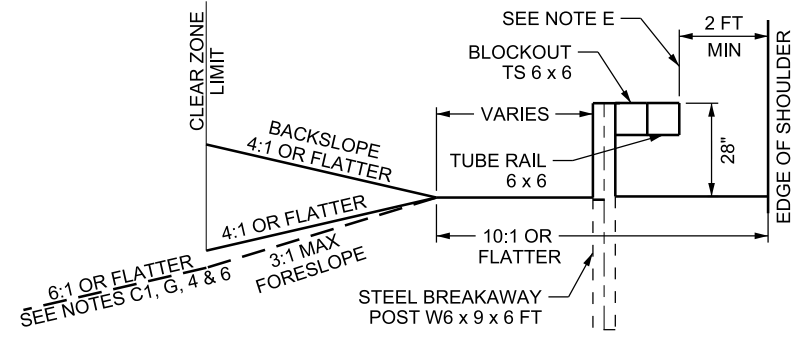


**DETAIL WHEN SYSTEM IS INSTALLED WITH NEW JERSEY SHAPED BARRIER**

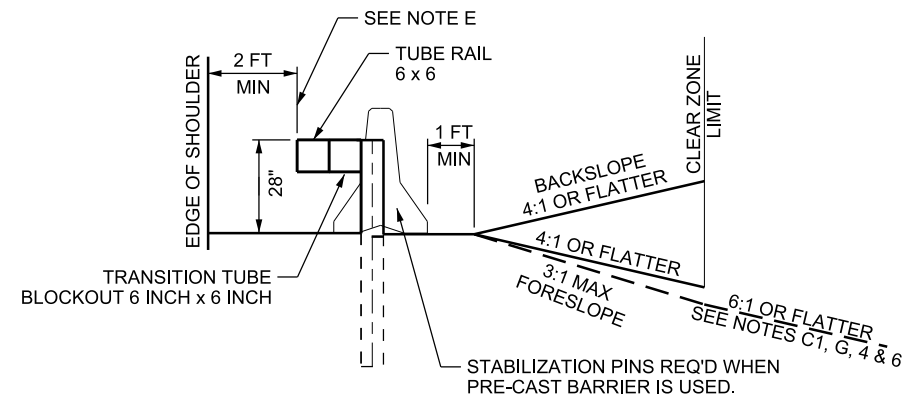
(GROUND MOUNTED POST SHOWN, SURFACE MOUNTED STEEL BREAKAWAY POST ACCEPTABLE, SEE NOTE 3)



**SECTION A-A**  
POST 1



**SECTION B-B**  
POSTS 2 TO POST 6



**SECTION C-C**  
POSTS 7-8

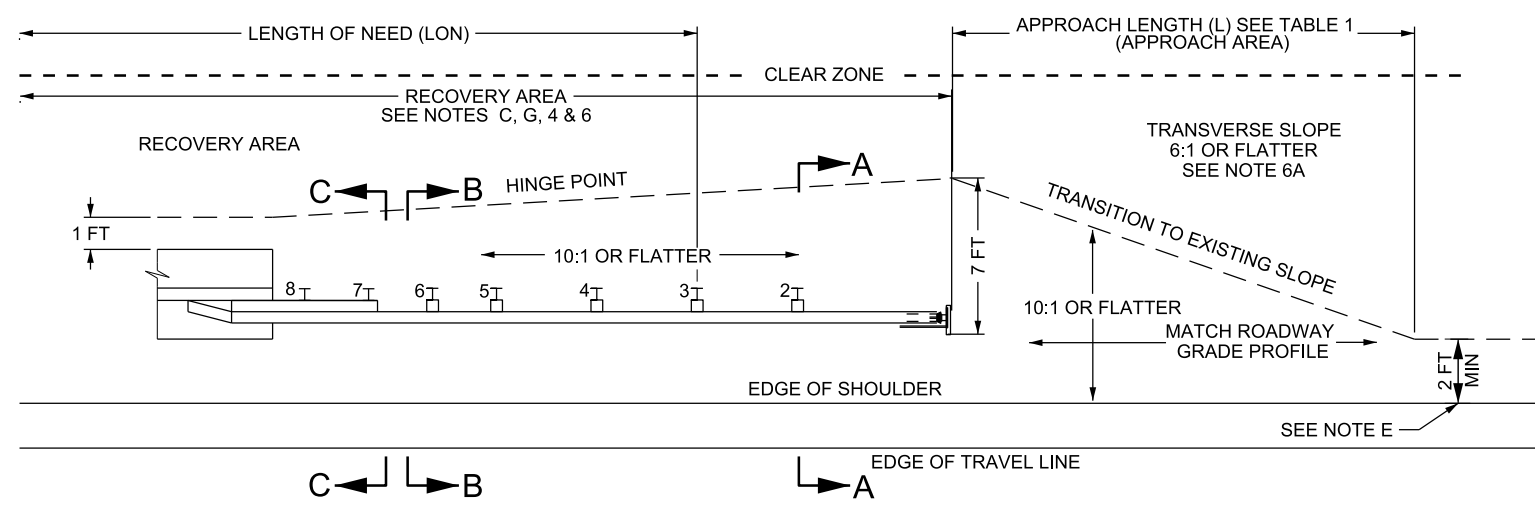
TABLE 1	
SPEED MPH	MIN LENGTH (L)
LESS THAN 40	50 FT
40 TO 55	70 FT
60 TO 80	100 FT

**DESIGN-ONLY NOTES:**

- A. THE BEAT-SSCC, MANUFACTURED BY ROAD SYSTEMS INC. SEE GUIDELINES FOR CRASH CUSHIONS & BARRIER END TREATMENTS FOR SPECIFIC SYSTEM DETAILS.
- B. USE SYSTEM WHEN DIRECT ATTACHMENT TO BARRIER IS REQUIRED AND THERE IS MORE THAN 125 FT OF LONGITUDINAL SPACE IN FRONT OF THE HAZARD. INSTALL SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
- C. MEET SLOPE REQUIREMENTS IN RECOVERY AREA AS DETAILED IN APPLICABLE UDOT ROADWAY DESIGN MANUAL DRAWINGS. THE ADDITIONAL INFORMATION LISTED BELOW IS THE MINIMUM ACCEPTABLE SLOPE REQUIREMENTS FOR THE APPROACH AREA OF THE END TREATMENT AND THE RECOVERY AREA.
  - 1. APPROACH AREA: THE AREA PRIOR TO IMPACTING A SYSTEM.
    - A) USE 10:1 OR FLATTER FORESLOPES IN APPROACH AREAS.
  - 2. RECOVERY AREA: THE AREA BEHIND THE END TREATMENT AND BARRIER SYSTEM EXTENDING FROM THE APPROACH END OF THE END TREATMENT TO THE END OF THE CALCULATED LENGTH OF NEED.
    - A) USE A 4:1 OR FLATTER FORESLOPE OR BACKSLOPE IN RECOVERY AREA.
    - B) USE A 3:1 FORESLOPE IN RECOVERY AREA IF IT IS IMPRACTICAL TO USE A 4:1 FORESLOPE. ESTABLISH A RECOVERY AREA AT THE TOE OF THE 3:1 FORESLOPE OF 6:1 OR FLATTER TO CLEAR ZONE LIMITS. REFER TO THE UDOT ROADWAY DESIGN MANUAL AND AASHTO ROADSIDE DESIGN GUIDE FOR ADDITIONAL INFORMATION.
    - C) USE A 4:1 OR FLATTER BACKSLOPE IN RECOVERY AREA TO THE CLEAR ZONE LIMIT, IF A 4:1 OR FLATTER BACKSLOPE CANNOT BE PROVIDED A 3:1 IS ACCEPTABLE.
- 3. MATCH ROADWAY GRADE PROFILE TO THE HEAD OF THE SYSTEM INSIDE THE APPROACH AREAS.
- D. REFER TO THE AASHTO ROADSIDE DESIGN GUIDE TO DETERMINE LENGTH OF NEED (LON) AND CLEAR ZONE REQUIREMENTS.
- E. 2 FT MINIMUM BARRIER OFFSET IS OPTIONAL WHEN ROADWAY DESIGN REQUIRES A 12 FT OR WIDER EFFECTIVE SHOULDER.
- F. DO NOT PLACE SIGNS, POSTS, OR OTHER HAZARDS IN APPROACH AREA. USE BREAKAWAY SIGNS OR POSTS WHEN PLACED IN RECOVERY AREA, AND MAINTAIN A MINIMUM 10 FT CLEARANCE TO THE SIDE AND 25 FT FROM THE REAR OF THE SYSTEM. MITIGATE POTENTIAL HAZARDS IN THE RECOVERY AREA.

**NOTES:**

- 1. ATTACH SYSTEM TRANSITION TO BARRIER OR BRIDGE PARAPET ACCORDING TO MANUFACTURER'S REQUIREMENTS. MODIFICATION NOT REQUIRED FOR NEW JERSEY STYLE BARRIERS OR PARAPETS. REFER TO BA 3 SERIES STD DWGS BEFORE ATTACHING CRASH CUSHION OR END TREATMENT TO CONSTANT SLOPE BARRIER. CONCRETE TRANSITION SECTION REQUIRED.
- 2. HAVE SHOP DRAWING AVAILABLE ON SITE FOR REFERENCE DURING INSTALLATION.
- 3. THE BEAT-SSCC REQUIRES A GRADED AND COMPACTED SURFACE WHEN GROUND MOUNTED POSTS ARE USED. SURFACE MOUNTED POST OPTIONAL, USE MANUFACTURER'S SPECIFICATIONS FOR CONCRETE PAD, POSTS AND MOUNTING HARDWARE.
- 4. COMPLETE SLOPE PREPARATION PRIOR TO INSTALLING SYSTEM.
- 5. CLEAR RECOVERY AND APPROACH AREAS OF ANY FIXED OBJECTS OR HAZARDS.
- 6. CONSTRUCT PLATFORM AS REQUIRED WHEN THE SPACE IS AVAILABLE EVEN IF THE PLATFORM EXTENDS BEYOND THE CLEAR ZONE REQUIREMENTS.
  - A) CONSTRUCT 6:1 OR FLATTER SLOPE FOR TRANSVERSE SLOPE FROM APPROACH PAD.
- 7. INSTALL REQUIRED MARKERS ACCORDING TO STD DWG CC 1, TYPE F.



**TYPE F END TREATMENT PLAN**

**SUPPLEMENTAL DRAWING**

REVISIONS

UTAH DEPARTMENT OF TRANSPORTATION  
STANDARD DRAWINGS FOR ROAD AND BRIDGE CONSTRUCTION  
SALT LAKE COUNTY, UTAH

RECOMMENDED FOR APPROVAL  
*Randall A. Layk*  
CHAIRMAN STANDARDS COMMITTEE  
APPROVED  
DEPUTY DIRECTOR

DATE: AUG 30, 2018  
DATE: AUG 30, 2018

GRADING AND  
INSTALLATION DETAILS  
END TREATMENT  
TYPE F  
BEAT-SSCC

STD. DWG. NO.  
CC 7B