



## Type A Crashworthy End Terminals Field Section 1040 Table 3

### Non-Flared Type A Crashworthy End Terminal

<u>Unit</u>	<u>Manufacturer</u>
Beam Eating Steel Terminal (BEST)	Gregory Highway Products, Inc. 4100 13 <sup>th</sup> St. S.W. P.O. Box 80508 Canton, OH 44708
ELT	see additional comments below
ET-PLUS	Trinity Industries Co. 2525 Stemmons Freeway Dallas, TX 75207
SKT 350	Road Systems, Inc. 7631 New Castle Drive Frankfort, IL 60423

### Flared Type A Crashworthy End Terminal

<u>Unit</u>	<u>Manufacturer</u>
Flared Energy Absorbing Terminal (FLEAT) and FLEAT-MT (Median Terminal)	Road Systems, Inc. P.O. Box 2163 Big Springs, TX 79721
REGENT	Energy Absorption Systems, Inc. One East Wacker Drive Chicago, IL 60601-2076
Slotted Rail Terminal (SRT-350), Improved Slotted Rail Terminal (ISRT-3), and SRT/HBA 6-Post System	Trinity Industries Co. 2525 Stemmons Freeway Dallas, TX 75207

## Type A Crashworthy End Terminals Field Section 1040 Table 3 (Cont.)

### Flared Type A Crashworthy End Terminal (Cont.)



**Unit**

SYRO Ross-350

**Manufacturer**

Trinity Industries Co.  
 2525 Stemmons Freeway  
 Dallas, TX 75207

Unit	NCHRP 350 Test Level	Crash Cushion/End Terminal			Use d as L-O-N (A)	Unit Width	Unit Length (B)	Engineer's Estimate for Installment	% Reusable or Average repair Cost	Max Cross-Slope	Clear Zone Req'd. (C)	Hazard Location			*Addtl Modifications	Addtl Length of Guard Rail	*No t es
		R	G	NR								M	G	R			
Beam Eating Steel Terminal (BEST)	TL-3	X	X		7.6 m (25' - 0") or 11.4 m (37'-6")	0.5 m (1' - 9")	11.4 m (37' - 6") or 15.2 m (50' - 0")	\$2,100	\$300-\$500	10:1	22.5 m x 6 m (75' - 20')	X		X		12.5' (3.81 m)	1,9
ELT	TL-3	X	X		7.6 m (25' - 0")	0.5 m (1' - 9") plus 1.2 m (4') Flare	11.4 m (37' - 6")	\$1,200	\$600-\$1,200	10:1				X			1
ET-Plus	TL-3 (or TL-2)	X	X		3.38 m (12'-6")	0.4 m (1'- 3")	15.2 m (50' - 0") or 11.4m (37'-6") or 7.6m (25')	\$2,500	\$300-\$500	10:1	22.5 m x 6 m (75' x 20')	X		X	4,6,7	0' (0 m)	1,7
Flared Energy Absorb. Terminal (FLEAT)	TL-3	X	X		7.6 m (25' - 0")	0.5 m (1' - 9") plus 1.2 m (4') Flare	11.4 m (37' - 6")	\$1,950	\$600-\$1,100	10:1	22.5 m x 6 m (75' x 20')			X	8	12.5' (3.81 m)	1
FLEAT-MT (Median Terminal)	TL-3	X	X		7.6 m (25' - 0")		11.4 m (37' - 6")		\$600-\$2,000	10:1	22.5 m x 6 m (75' x 20')			X		12.5' (3.81 m)	1
Improved Slotted Rail Terminal (ISRT-3)	TL-3	X	X		7.6 m (25' - 0")	0.5 m (1' - 9") plus .91 m (3' - 0")	8.9 m (29' - 2")	\$1,950	\$600-\$1,100	10:1	22.5 m x 6 m (75' x 20')			X		12.5' (3.81 m)	1



## Type A Crashworthy End Terminals Field Section 1040 Table 3 (Cont.)

Unit	NCHRP 350 Test Level	Crash Cushion/ End Terminal			Used as L- O-N (A)	Unit Width	Unit Leng- th (B)	Engineer's Estimate for Installation	% Reusable or Average repair Cost	Max. Cross- Slope	Clear Zone Reqd. (C)	Hazard Location			*Addtl Modifica- tions	Addtl Length of Guard Rail	* No t e s
		R	G	NR								M	G	R			
REGENT	TL-3	X	X		7.6 m (25' - 0")	0.5 m (1' - 9") plus 1.3 m (4' - 3') Flare	11.4 m (37' - 6")	\$1,950	\$600- \$1,100	10:1	22.5 m x 6 m (75' x 20')			X		12.5' (3.81 m)	1
SKT	TL-3	X	X		11.4 m (37' - 6")	0.5 m (1' - 9")	15.2 m (50' - 0')	\$2,100	\$300-\$500	10:1	22.5 m x 6 m (75' - 20')	X		X	7	0' (0 m)	1,9
Slotted Rail Terminal (SRT-350)	TL-3	X	X		7.6 m (25' - 0")	0.5 m (1' - 9") plus 1.2 m (4') flare	11.4 m (37' - 6")	\$1,950	\$600- \$1,100	10:1	22.5 m x 6 m (75' x 20')			X		12.5' (3.81 m)	1
SRT-350 6 Post System	TL-3	X	X		7.6 m (25' - 0")	0.5 m (1' - 9") plus 1.2 m (4') Flare	11.4 m (37' - 6")	\$1,950	\$600 - \$1,100	10:1	22.5 m X 6 m (75' x 20')			X		12.5' (3.81 m)	1
SRT/HBA 6- Post System	TL-3	X	X		7.6 m (25' - 0")	0.5 m (1' - 9") plus 1.2 m (4') Flare	11.4 m (37' - 6")	\$1,850	\$300-\$500	10:1	22.5 m x 6 m (75' x 20')			X		12.5' (3.81 m)	1
SYRO ROSS- 350	TL-3	X	X		7.6 m (25' - 0")	0.5 m (1' - 9") plus 0.9 m (3') Flare	11.4 m (37' - 6")	\$1,950	\$600- \$1,100	10:1	22.5 m x 6 m (75' x 20')			X		12.5' (3.81 m)	1

### \*Notes/Definitions

1. Reverse Impact Treated
2. Two-way Traffic
3. Deck/Structure Required
4. ET-2000 Plus Extruder Head (can be used on any of the ET-2000 and LET units)
- 5.
6. Steel Ground Strut
7. With wood post, steel breakaway posts or steel hinged-post option
8. With wood post or steel breakaway posts

- (A) Use designated length of system as part of required length of need to protect hazard.  
 (B) System length does not include transition section required to connect system to guardrail, median barrier or retaining wall.  
 (C) Based on 62.5 mph.



## Type A Crashworthy End Terminals Field Section 1040 Table 3 (Cont.)

### **Crash Cushion/End Terminal**

R = Redirectional  
G = Gating  
NR = Non-Redirectional

### **Hazard Location**

M = Median  
G = Gore  
R = Roadside

### **Additional Comments**

BEST - For divided highway applications, do not use if the distance from the face of the guardrail to the opposing lanes of traffic is less than or equal to 25'.

ELT – Grading must be shown on Minnesota DOT standard plans. Posts 3-7 CRT posts, post 8 and all downstream posts must be standard timberline posts.

ET-PLUS – For divided highway applications, do not use if the distance from the face of the guardrail to the opposing lanes of traffic is less than or equal to 25'.

FLEAT – Do not use in curb sections. May not be used in median only when in combination with 3 strand guard cable for protection of median piers or other such obstacles.

FLEAT-MT – Do not use behind curb sections. May be used in median only when in combination with 3-strand guard cable for protection of median piers or other such obstacles.

I-SRT-3 – Do not use behind curb sections. May be used in median only when in combination with 3-strand guard cable for protection of median piers or other such obstacles.

REGENT – Do not use in median or behind curb sections.

SKT – For divided highway applications, do not use if the distance from the face of the guardrail to the opposing lanes of traffic is less than or equal to 25'. When used, the Steel Hinged-Post Option allows for fast and easy installation and repair.



## **Type A Crashworthy End Terminals Field Section 1040 Table 3 (Cont.)**

SKT 350 – Do not use behind curb sections. May be used in median only when in combination with 3-strand guard cable for protection of median piers or other such obstacles.

SKT 350(6 posts) - Do not use behind curb sections. May be used in median only when in combination with 3-strand guard cable for protection of median piers or other such obstacles.

SRT/HBA – Do not use in median or behind curb sections.

