

Safety and Occupational Health  
SAFETY AND HEALTH REQUIREMENTS MANUAL  
2008 EDITION

1. These changes shall be in effect as of 1 November 2010. For contractual work, all contracts whose date of solicitation is 1 November 2010 or later shall consider this change in effect. All underlined wording is specific to this change.

These changes/updates are required to: streamline, improve and clarify fall protection requirements addressed in various sections; eliminate redundancy and duplication of requirements; incorporate the latest ANSI Z359 Standards and products; and delete requirements directing user to use equipment in a certain way.

2. This Change 2 affects the following paragraphs:

- |    |                                |   |
|----|--------------------------------|---|
| a. | 05.H:                          | Change wording;                               |
| b. | 05.H.01, 02:                   | Delete;                                       |
| c. | 16.T.10:                       | Change wording;                               |
| d. | 19.B.01.a:                     | Change wording;                               |
| e. | 19.C.03:                       | Change reference;                             |
| f. | 21.A.02.d:                     | Change wording;                               |
| g. | 21.B.01:                       | Add wording;                                  |
| h. | 21.B.04:                       | Add new paragraph;                            |
| i. | 21.C.01:                       | Add wording;                                  |
| j. | 21.C.01.a:                     | Add wording;                                  |
| k. | 21.C.02:                       | Change/add wording;                           |
| l. | 21.E:                          | Add wording;                                  |
| m. | 21.H.05:                       | Change reference;                             |
| n. | 21.H.05.d (1):                 | Change reference;                             |
| o. | 21.H.05.d (3) (a):             | Change reference;                             |
| p. | 21.H.05.d (3) (a) > (Note):    | Delete note;                                  |
| q. | 21.H.05.d (4) (a):             | Change wording;                               |
| r. | 21.H.05.d (4) (a) (i) – (iii): | Add 3 new paragraphs;                         |
| s. | 21.H.05.d (4) (b):             | Break into sub-paragraphs and change wording; |

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Change 2

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t.	21.H.05.d (5) (c):	Change wording;
u.	21.H.05.d.(6) (b):	Break into sub-paragraphs and change wording;
v.	21.J.03.c:	Add new paragraph;
w.	21.J.04:	Change wording;
x.	21.K.05:	Change wording;
y.	21.N.01:	Add wording;
z.	21.N.05:	Add new paragraph;
aa.	21.O:	Add new section;
bb.	22.A.02:	Change wording;
cc.	22.A.02.b:	Add sentence;
dd.	22.E.15, 22.E.15.a-c:	Delete;
ee.	22.F.02.e:	Delete and add wording;
ff.	22.L.07:	Delete;
gg.	22.M.05.h:	Add new paragraph;
hh.	22.M.06.a, b and c:	Delete;
ii.	22.O.03:	Delete;
jj.	22.P.06:	Delete;
kk.	24.A.01.d:	Change wording;
ll.	27.C.14:	Delete;
mm.	27.G.03.a-b:	Delete and add wording;
nn.	27.G.04.a-c:	Delete and add wording;
oo.	27.G.06:	Delete;
pp.	27.G.07:	Delete;.
qq.	27.G.08.a-b:	Delete;
rr.	27.G.09:	Delete;
ss.	27.G.10.a-d:	Delete;
tt.	31.A.01.d:	Delete;
uu.	31.A.08.	Add paragraph;
vv.	31.A.08.a and b:	Delete;
ww.	Appendix B, Paragraph 12.C:	Change reference;
xx.	Appendix F, Fall Protection:	Add pictograms;
yy.	Appendix Q:	Add 2 new definitions;
zz.	App.S, ANSI/ASSE Z359.0 - .4:	Delete.

3. Make corrections/changes to the following paragraphs. All underlined wording is specific to this change.

- a. Paragraph 05.H, change wording: "05.H. **PERSONAL FALL ARREST EQUIPMENT INCLUDING LINEMAN'S EQUIPMENT (ELECTRICALLY RATED HARNESSES)**. See Section 21.H.05";
- b. Paragraphs 05.H.01 and 05.H.02, Delete;

- c. Paragraph 16.T.10, change wording: “Personnel Fall Protection” to “Personal Fall Protection”;
- d. Paragraph 19.B.01.a, change wording: “> **See Sections 21, 24 and 19.C.**” to “> **See Section 24**”;
- e. Paragraph 19.C.03, change wording: “...requirements of Section 21.C. may be used...” to “...requirements of Section 21.H may be used...”;
- f. Paragraph 21.A.02.d, change wording: “...fall arrest, (all systems require the use of full body harness, lanyard, and lifeline);”
- g. Add wording to end of 21.B.01: “> **See Appendix Q for definition of Competent Person for Fall Protection.**”
- h. Paragraph 21.B.04, add new paragraph: “21.B.04 Training of all personnel involved in the FP Program – Program Administrators, Qualified Persons, Competent Persons, End Users (i.e., Authorized Persons), Authorized Rescuers, as well as any associated FP trainers – shall be as described in ANSI/ASSE Z359.2.”;
- i. Paragraph 21.C.01, add wording to read:

“21.C.01 If Contractor has personnel working at heights, exposed to fall hazards and using fall protection equipment, he shall develop a Site-Specific Fall Protection and Prevention Plan and submit it to the GDA for acceptance as part of their APP. This plan may be developed by either the Competent Person for Fall Protection (CP for FP) or Qualified Person for Fall Protection (QP for FP). If the plan includes FP components or systems requiring direction, supervision, design calculations or drawings by a QP for FP, the name, qualifications and responsibilities of the QP for FP shall be addressed in this plan. The plan shall describe, in detail, the specific practices, equipment and methods used to protect workers from falling to lower levels. This plan shall be updated as conditions change, at least every six months and shall include:“;
- j. Add wording to end of 21.C.01.a: “> **See Appendix Q for definition of Qualified Person for Fall Protection.**”
- k. Paragraph 21.C.02, change/add wording to read: “Each government-owned facility shall develop a written fall protection program if they have personnel working at heights, exposed to fall hazards and using fall protection equipment. The facility shall conduct a fall hazard survey,

prepare survey reports at existing building or structures, and comply with the program elements and requirements as identified in 21.C.01.”

- l. Paragraph 21.E, Add Note: **“21.E. FALL PROTECTION SYSTEMS. > NOTE: For existing parapet walls with heights of less than 42 in (1 m), the parapet wall may be used as a fall protection system if the vertical height is a minimum of 30 in (76 cm) and the width a minimum of 18 in (46 cm) at the top of the wall for a total of 48 in (1.2 m) combined. The effective height of a parapet wall is the sum of the height of the wall and the wall width at the top of the wall. New parapet walls shall be designed to a height of 42 in +/- 3 in (1 m +/- 8 cm) to be considered adequate fall protection systems.”**;
- m. Paragraph 21.H.05, change reference: **“ANSI/ASSE Z359.1 – 2007”** to **“ANSI/ASSE Z359, Fall Protection Code.”**;
- n. Paragraph 21.H.05.d (1), change reference: **“ANSI/ASSE Z359.1”** **“ANSI/ASSE Z359, Fall Protection Code.”**;
- o. Paragraph 21.H.05.d (3) (a), change reference: **“ANSI/ASSE Z359.1 – 2007”** to **“ANSI/ASSE Z359, Fall Protection Code.”**;
- p. Paragraph 21.H.05.d (3) (a) **> (Note)**, Delete Note;
- q. Paragraph 21.H.05.d (4) (a), Delete last sentence/replace with the following: **“The maximum length of single or “Y” lanyards used in fall arrest shall not exceed 6 ft (1.8 m).”**;
- r. Paragraphs 21.H.05.d (4) (a) (i) – (iii), Add the following new paragraphs prior to the Note, **>**);

**“(i) The 6 ft (1.8 m) Free Fall (FF) energy absorbing lanyard shall only be used when the tie-off point is above the dorsal D-ring creating a FF distance of less than 6 ft (1.8 m). The average arrest force on the body shall not exceed 900 lbs (4 kN);**

**(ii) When an anchor point is below the dorsal D-ring, a FF distance greater than 6 ft (1.8 m) is created. For these situations, a 12 ft (3.6 m) FF energy absorbing lanyard shall be used in accordance with manufacturer’s instructions and recommendations. The average arrest force on the body shall not exceed 1,350 lbs (6 kN). The 12 ft FF energy absorbing lanyard shall be used when the tie-off point is below the dorsal D-ring.**

**NOTE: A 12 ft (3.6 m) FF energy absorbing lanyard does not refer to the lanyard length. Instead it refers to a FF that is**

**greater than 6 ft (1.8 m) up to 12 ft which is created by the anchor point being located below the dorsal D-ring. The maximum lanyard length shall not exceed 6 ft. (Personnel whose body weight and equipment exceed 310 lbs may not use the 12 ft FF energy absorbing lanyard - always refer to equipment labels and manufacturer's instructions and restrictions).**

(iii) The 6 ft (1.8 m) and 12 ft (3.6 m) FF energy absorbing lanyards shall meet the requirements of ANSI/ASSE Z359.13 Standard. **See Figures F-1 and F-2.**”;

- s. Paragraph 21.H.05.d (4)(b), Break into sub-paragraphs; Change to read:

21.H.05.d (4) (b) When using lanyard with two integrally connected legs for 100% tie-off, attach only the snaphook at the center of the lanyard to the fall arrest attachment element of the harness (D-ring).

(i) The two legs of the lanyard and the joint between the legs shall withstand a force of 5,000 lbs (22.2 kN).

(ii) When one leg of the lanyard is attached to the anchorage, the unused leg of the lanyard shall not be attached to any part of the harness except to attachment points specifically designated by the manufacturer for this purpose.

(iii) The 6 ft (1.8 m) FF “Y” lanyard shall only be used when the tie-off point is above the dorsal D-ring height and when the FF distance is less than 6 ft.

(iv) When the tie-off point is located below the dorsal D-ring, the FF distance is greater than 6 ft (1.8 m) so a 12 ft (3.6 m) FF “Y” lanyard may be used.

**NOTE: A 12 ft (3.6 m) FF energy absorbing “Y” lanyard does not refer to the lanyard length. Instead it refers to a FF that is greater than 6 ft (1.8 m) up to 12 ft which is created by the anchor point being located below the dorsal D-ring. The maximum lanyard length used shall not exceed 6 ft. (Personnel whose body weight and equipment exceed 310 lbs may not use the 12 ft FF energy absorbing lanyard - always refer to equipment labels and manufacturer's instructions and restrictions).**

(v) The maximum arrest force on the body shall not exceed 1800 lbs (8 kN).

(vi) The 6 ft (1.8 m) and 12 ft (3.6 m) FF energy absorbing “Y” lanyards shall meet ANSI/ASSE Z359.13 standard. See **Figures F-3 and F-4.**”;

- t. Paragraph 21.H.05.d (5)(c) Note, change wording to read: “> **Do not use electric conduits, utility pipes, ductwork or unstable points as anchorages for PFAS.**”;
- u. Paragraph 21.H.05.d (6) (b), Break into sub-paragraphs; Change to read:

21.H.05.d (6) (b) Horizontal lifeline (HLL). A HLL is a fall arrest subsystem consisting of flexible wire, rope or synthetic cable, spanned horizontally between two end anchorages. It may include in-line energy absorber, lifeline tensioner, turnbuckles or intermediate anchorages.

(i) Locally manufactured HLLs are not acceptable unless they are custom designed for limited or site specific applications by a registered professional engineer who is also qualified in designing HLL systems.

(ii) Commercially manufactured HLLs shall be designed, installed, certified and used under the supervision of QP for FP only, as part of a complete fall arrest system. The CP for FP may (if deemed appropriate by QP for FP), supervise the assembly, disassembly, use and inspection of the HLL systems, under the direction of the QP for FP.

(iii) The design shall include drawings, required clearance, instructions on proper installation, and use procedures, proof testing reports and inspection requirements.

(iv) All HLL anchorages shall be designed by a Registered Professional Engineer (RPE) who is also qualified in designing HLL systems. < See ANSI/ASSE Z359.6.

(v) The design of all HLLs shall be reviewed and accepted by the GDA as part of the Fall Protection and Prevention Plan.”;

- v. Paragraph 21.J.03.c, Add new paragraph: “c A risk assessment shall be performed when persons are supported on a multi-point

adjustable suspended scaffold to evaluate the effectiveness and feasibility of the use of personal fall protection systems. Results shall be documented in the AHA for the activity being performed. > **See 21.H.05.**”;

- w. Paragraph 21.J.04, Change to read: “Elevating Work Platforms/Scissors Lifts: Scissors lifts shall be equipped with standard guardrails. In addition to the guardrail provided, the scissors lift shall be equipped with anchorages meeting ANSI Z359, Fall Protection Code. A restraint system shall be used in addition to guardrails. Lanyards used with the restraint system shall be sufficiently short to prohibit workers from climbing out of, or being ejected from, the platform. Scissor lifts equipped with anchorages that don't meet ANSI Z359, Fall Protection Code may be used until 1 October 2011, at which time they must be either equipped with such anchorages or removed from service.”;
- x. Paragraph 21.K.05, Change to read: “21.K.05 For roofing work on flat roofs, the WLS shall be erected not less than 6 ft (1.8 m) from the edge of the roof. For low-sloped roofs and/or when using mechanical equipment the WLS shall be erected not less than 15 ft (4.5 m) from the edge of the roof.”;
- y. Paragraph 21.N.01, add wording at end: “...***provided in AHA. See 21.N.05.***”;
- z. Paragraph 21.N.05, Add new paragraph: “ 21.N.05 When working from/in machinery (mechanically operated equipment), aerial lift equipment or other movable work platforms/cranes directly over water AND the depth of the water is at least 10 ft (3 m) deep, fall protection is not required however, PFDs are required. When working from/in machinery (mechanically operated equipment), aerial lift equipment or other movable work platforms/cranes directly over intakes or currents, fall protection is required. > **See 21.N.03.**”;
- aa. Paragraph 21.O, Add new Section:

“21.O Other Engineered Fall Protection Systems.

21.O.01 Commercially available engineered systems are recognized as effective fall protection and may be used. These are systems that are not addressed in Paragraph 21.E.

21.O.02 Commercially available engineered systems shall be designed, installed, certified and used under the supervision of QP for FP only. They shall be used per manufacturer instructions

and recommendations. The CP for FP may (if deemed appropriate by QP for FP), supervise the assembly, disassembly, use and inspection of the engineered system, under the direction of the QP for FP.

21.O.03 The design shall include drawings, required clearance, instructions on proper installation, use and inspection requirements. These systems shall be reviewed and accepted by the GDA as part of the Fall Protection and Prevention Plan.”;

- bb. Paragraph 22.A.02, Change to read: “Work platforms and scaffolding shall comply with fall protection and appropriate access requirements of Sections 21 and 24.”;
- cc. Paragraph 22.A.02.b, Change wording: “Standard railing and handrails for stairs shall be in compliance with the requirements of Sections 24.C and E; Standard guardrails shall be in compliance with Section 21.E.01; personal fall protection devices shall be in compliance with Section 21.H; and safety (fall protection) nets shall be in compliance with the requirements of 21.G.”;
- dd. Paragraph 22.E.15, 22.E.15.a, b and c, Delete;
- ee. Paragraph 22.F.02.e, Delete requirement: Insert “Not used.”;
- ff. Paragraph 22.L.07, Delete;
- gg. Paragraph 22.M.05.h, Add new paragraph: “h. Occupants shall always stand firmly on the floor of the basket and shall not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position.”;
- hh. Paragraphs 22.M 06.a, b and c, Delete;
- ii. Paragraph 22.O.03, Delete;
- jj. Paragraph 22.P.06, Delete;
- kk. Paragraph 24.A.01.d, Change wording to read: “For all government-owned/operated facilities, every open-sided floor or platform 4 ft (1.2 m) or more above adjacent floor or ground level shall be guarded by a guardrail system (or equivalent) along all open sides (except where there is an entrance to a ramp, stairway or fixed ladder. The guardrail system shall be provided with a toeboard when necessary. > **See 21.E.01.**”;

- ll. Paragraph 27.C.14, Delete;
- mm. Paragraph 27.G.03.a-b, Delete requirement: Insert “Not used.”;
- nn. Paragraphs 27.G.04.a-c, Delete requirement: Insert “Not used.”;
- oo. Paragraph 27.G.06, Delete;
- pp. Paragraph 27.G.07, Delete;
- qq. Paragraph 27.G.08.a-b, Delete;
- rr. Paragraph 27.G.09, Delete;
- ss. Paragraph 27.G.10.a-d, Delete;
- tt. Paragraph 31.A.01.d, Delete;
- uu. Paragraph 31.A.08, Add paragraph: “31.A.08 Aerial Platforms and Bucket Trucks. Tree Workers in a bucket or work platform shall use fall protection in accordance with Section 21. A full body harness with a climber’s belt incorporated into the harness shall be worn by all workers.”;
- vv. Paragraphs 31.A.08.a and b, Delete;
- ww. Appendix B, Paragraph 12.C, Change reference: “Use of the OSHA’s Interim Fall Protection Compliance Guidelines for Residential Construction, STD 3-0.1A.”;
- xx. **Appendix F, Fall Protection Pictograms**, Add pictograms F-1, F-2, F-3, F and F-4 (attached);
- yy. Appendix Q, Add new definitions:

**Free Fall Distance.** The vertical distance traveled during a fall, measured from the onset of a fall from a walking working surface to the point at which the fall protection system begins to arrest the fall. This distance excludes deceleration distance and the elongation of a lifeline or lanyard, but includes any distance that a deceleration device slides before engaging or the distance that a self retracting lifeline or lanyard extends before fall arrest forces are applied. The distance is measured using a common reference point, typically the fall arrest attachment. The term “free fall distance” has applicability beyond just personal fall arrest systems. For example, as used in the context of a positioning system,

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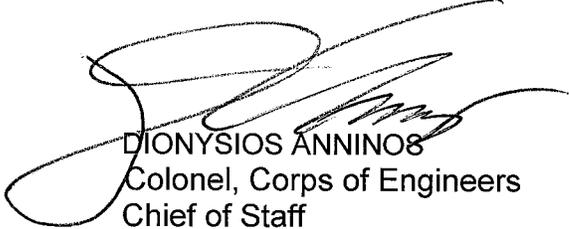
free fall distance refers to the slack in the system, which will convert to travel distance during a fall event.

**Total Fall Distance.** The total vertical distance a person falls, measured from the onset of a fall to the point where the person comes to rest after the fall is stopped. Total fall distance includes free fall distance and deceleration distance, but excludes dynamic elongation.”;

zz. Appendix S, ANSI/ASSE Z359.0, Z359.1, Z359.2, Z359.3, Z359.4, Delete.

4. File this change sheet in front of the publication for reference purposes.

FOR THE COMMANDER:

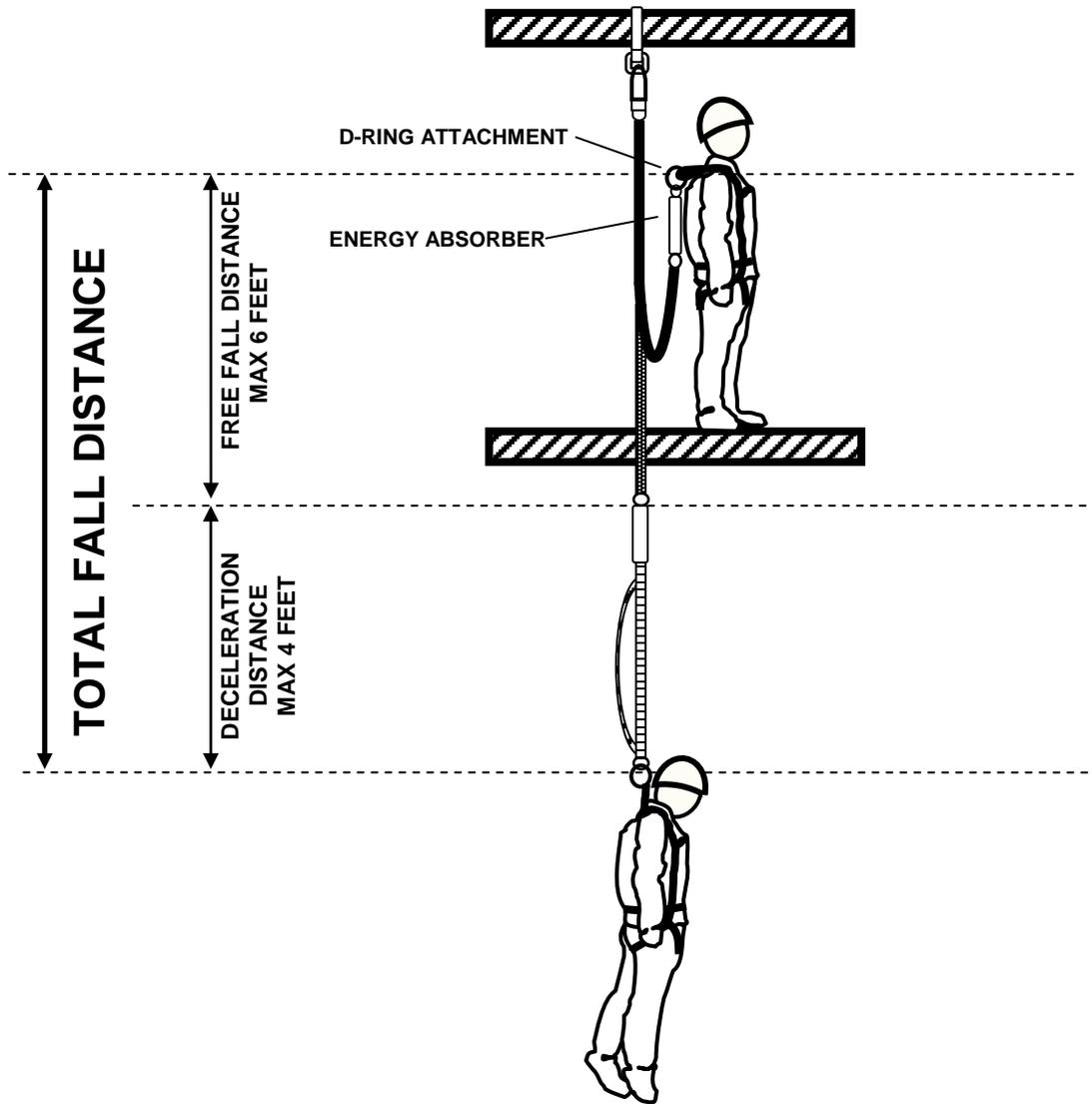


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Colonel, Corps of Engineers  
Chief of Staff

APPENDIX F

FIGURE F-1

6 FOOT FREE FALL, ENERGY ABSORBING SINGLE LANYARD

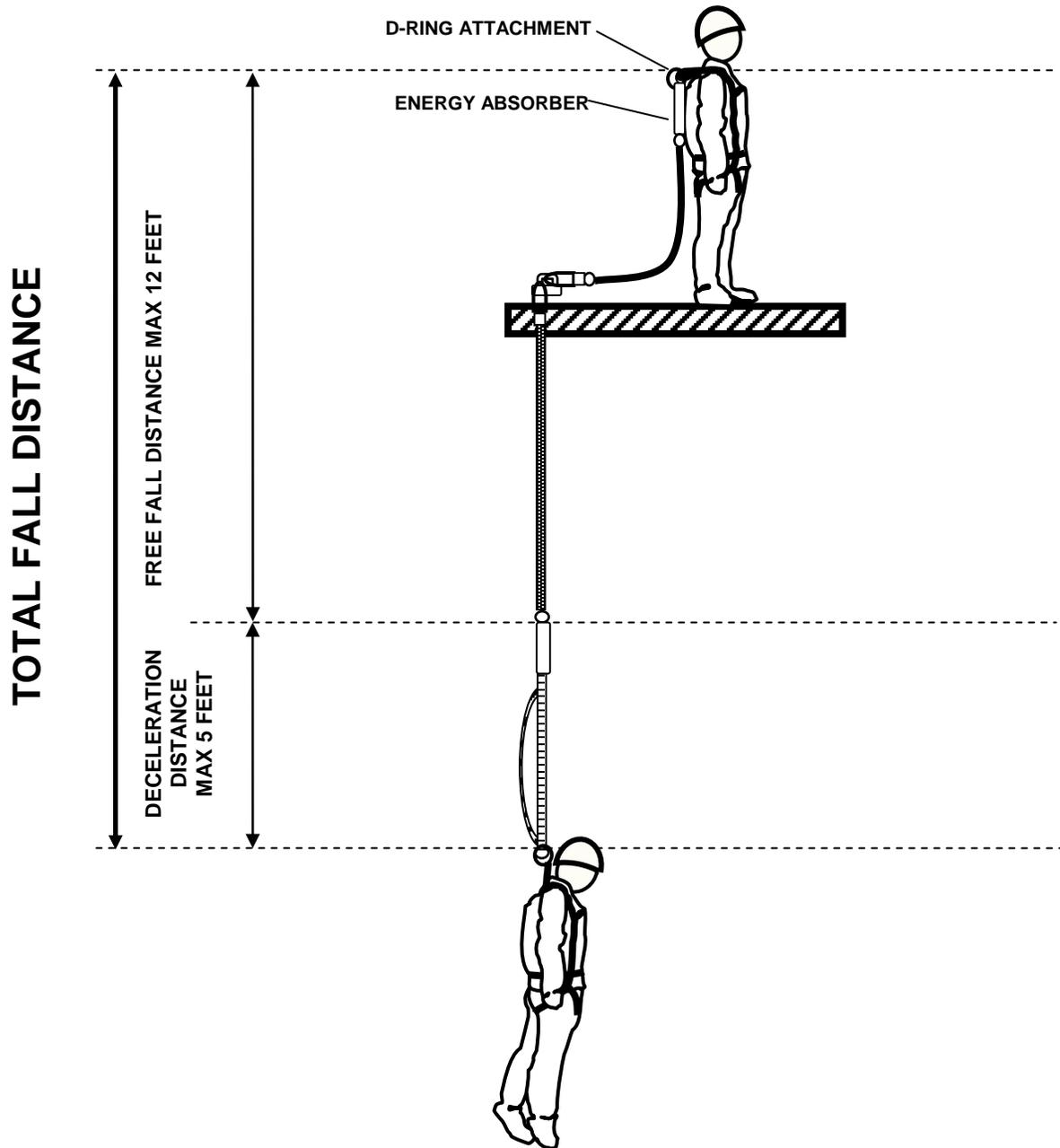


Note: The 6 foot maximum free fall will occur when the tie-off point is at the dorsal D-ring level. If the tie-off point is above the dorsal D-ring level, the free fall distance will be less than 6 feet.

F-1

FIGURE F-2

12 FOOT FREE FALL, ENERGY ABSORBING SINGLE LANYARD

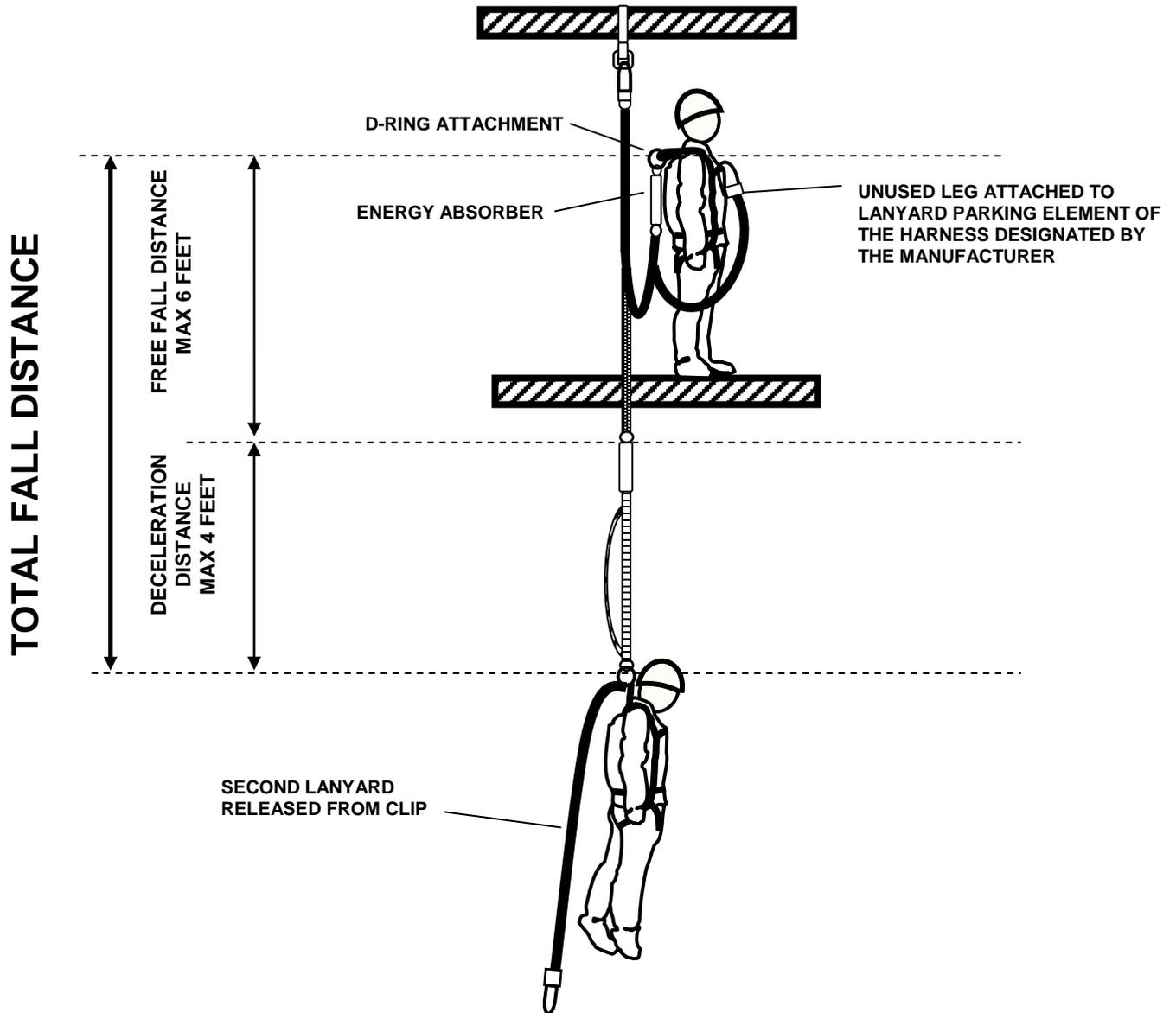


Note: The 12 foot maximum free fall will occur when the tie-off point is at the employee's foot level. If the tie-off point is above the walking/ working level, the free fall distance will be less than 12 feet.

F-2

FIGURE F-3

6 FOOT FREE FALL, ENERGY ABSORBING "Y" LANYARD

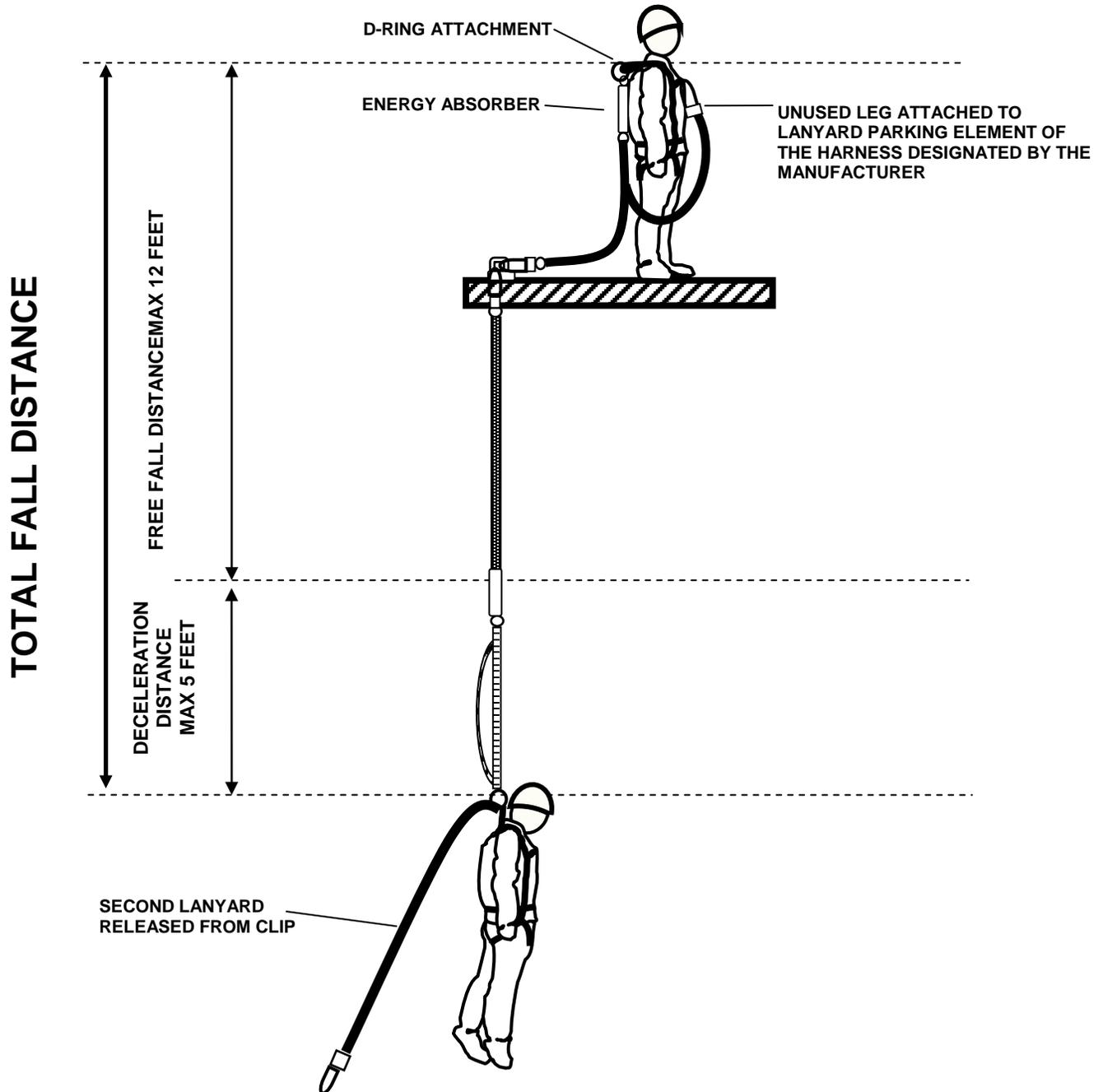


Note: The 6 foot maximum free fall will occur when the tie-off point is at the dorsal D-ring level. If the tie-off point is above the dorsal D-ring level, the free fall distance will be less than 6 feet.

F-3

FIGURE F-4

12 FOOT FREE FALL, ENERGY ABSORBING "Y" LANYARD



Note: The 12 foot maximum free fall will occur when the tie-off point is at the employee's foot level. If the tie-off point is above the walking/ working level, the free fall distance will be less than 12 feet.

F-4