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Standard Guide for Temporary Fence Applications for Construction Sites¹

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1. Scope

1.1 This guide covers a variety of materials and methods used in the construction of temporary fences.

1.2 Temporary fences are physical barriers used to define and designate the boundary of construction sites.

1.3 Temporary fences are intended to be installed before any construction activity starting and removed at the end of the construction phase. The duration of service can vary; consideration should be given to the length of time the temporary fence will be in use.

1.4 When determining and specifying materials and installation methods, investigate contract specifications, contract documents, site plan fence location, and, possibly, local codes. Before installation, review and inspect existing site conditions. In some cases, a permanent fence installation should be used as temporary fencing.

1.5 *Units*—The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.6 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.7 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

¹ This guide is under the jurisdiction of ASTM Committee F14 on Fences and is the direct responsibility of Subcommittee F14.10 on Specific Applications and Other Fence Systems and Components.

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2. Referenced Documents

2.1 ASTM Standards:²

F567 Practice for Installation of Chain-Link Fence

F900 Specification for Industrial and Commercial Steel Swing Gates

F1184 Specification for Industrial and Commercial Horizontal Slide Gates

2.2 ASCE/SEI Standard:³

ASCE/SEI 7-10 American Society of Civil Engineers/Structural Engineering Institute, Minimum Design Loads for Buildings and Other Structures

2.3 Chain Link Fence Manufacturers Institute Document:⁴

WLG 2445 Chain Link Fence Wind Load Guide for the Selection of Line Post and Line Post Spacing

3. Terminology

3.1 Definitions:

3.1.1 *bracing, n*—when required, diagonal steel tube secured to each panel end upright and secured to the ground, on the inside of the site, to support the panels in a vertical position or reinforce with a perpendicular panel, or add additional post installed at the midpoint of the panel then clamped to the panel.

3.1.2 *continuous barrier, n*—continuous line of fence or any multiple panel installation in which panels are securely attached and spaced less than 4 in. (101.6 mm) apart.

3.1.3 *panel, n*—welded steel tube rectangular frame filled with steel mesh or freestanding rectangular structural welded wire mesh section

3.1.4 *portable support base, n*—steel, concrete, or polymer frames that, when placed on the ground, provide a receptacle for posts or panel allowing a continuous barrier to be erected.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from American Society of Civil Engineers (ASCE), 1801 Alexander Bell Dr., Reston, VA 20191, <http://www.asce.org>.

⁴ Available from the Chain Link Fence Manufacturers Institute, 10015 Old Columbia Rd., Suite B215, Columbia, MD 21046, www.chainlinkinfo.org.

3.1.4.1 *Discussion*—Sand bags or other forms of additional weight can be placed on top of support base providing additional support.

3.1.4.2 *Discussion*—The support base for welded panel frames having extended bottom members is designed to receive two extended bottom members, one from each panel.

3.1.5 *steel posts, n*—galvanized steel posts that, when driven into the ground or set in a portable support base, provide required horizontal support for a temporary fence.

4. Summary of Guide

4.1 This guide is intended primarily to assist those responsible for or concerned with the design and installation of temporary fence and gates used at construction sites.

4.2 This guide does not intend to preclude any practice or standard that has proven equal to or given better performance under varying conditions.

5. Significance and Use

5.1 This guide sets forth the minimum standard requirements for the application of temporary fences for construction sites by installing 6 or 8 ft (1.83 or 2.44 m) high temporary construction fence enclosures used to delineate and form a physical barrier on the construction site. A wide variety of materials, both new and used, are acceptable as long as the finished product is neat and uniform in appearance.

5.2 Temporary fences should form a continuous barrier, panel type fence to be securely attached together or to a supporting post with steel fitting forming a positive connection.

NOTE 1—Warning to end user regarding screening: Wind screens applied to a fence form a solid barrier. The temporary fence described in this standard is not capable of handling 110 MPH wind gusts per ASCE/SEI 7-10. If screening is to be installed the fence should be researched and designed the same as a permanent fence to support the wind load; refer to Chain Link Manufacturers Institute Wind Load Guide, WLG 2445.

NOTE 2—Warning to end user regarding installations adjacent to open excavation and street corners. Refer to contract documents, site plans, or local codes for fence offset from excavations and to ensure vehicles a clear line of sight for street corner safety.

6. Materials

6.1 *Types of Temporary Fence, Base Supports, and Fittings:*

6.1.1 Galvanized steel panels 6 or 8 ft (1.83 or 2.44 m) high, maximum 14 ft (4.27 m) wide, constructed of a welded steel tube frame filled with galvanized steel mesh. Panels to be designed to be secured to portable base or galvanized steel post. The post can be driven or attached to a portable base.

6.1.2 Structural designed galvanized or polymer-coated welded wire mesh panels 6 or 8 ft (1.83 or 2.44 m) high, maximum 14 ft (4.27 m) wide, attached to and supported by galvanized steel posts driven or secured to a portable support base.

6.1.3 Metallic or polymer-coated chain-link fabric installed similar to a typical permanent chain-link fence supported by galvanized steel posts driven into the ground spaced no more

than 10 ft (3.7 m) on center. The fence is to have top and bottom tension wire secured to the fabric 15 in. (318 mm) on center via hog rings.

6.1.4 Galvanized fittings, pressed steel clamps, or steel rings for securing panels together or panel to post.

6.1.5 Portable bases constructed of steel, concrete, or polymer frames designed to support installed panels.

7. Gates

7.1 If industrial design gates are required and specified the swing gates and their supporting posts to be in accordance with Specification F900, horizontal sliding gates in accordance with Specification F1184. Gates and gate posts installed per Practice F567.

8. Installation

8.1 Welded tube framed fence panels are installed by either inserting the panel frame vertical bottom extension into a portable base, or inserting the vertical bottom of the panel onto the portable base's upright peg. Then securing the panels together with galvanized steel fitting or fittings. Other styles of welded tube panels along with welded wire mesh panels are to be installed with posts. Posts to be driven a minimum of 2 ft or until panel is secure. If driving the post to a secure depth is not possible, or the customer does not want driven posts, then the posts can be installed using a portable base plate. Posts should pass through steel galvanized rings or secured to panels with galvanized steel fittings. Free standing chain link temporary fence is supported by driving post a minimum of 2 ft (609.6 mm) or until secure, spaced a maximum of 10 ft (3.05 m) on center and fabric stretched similar to that of a permanent chain link fence. Tension wire to be installed at the top and bottom of the fence. The installation of a top rail is not generally required unless needed for added safety; for such applications, install tension wire at the bottom.

8.2 Barbed wire is generally not installed on temporary fences. Consult local codes, project architect or owner if required for special security.

8.3 Barb tape should not be installed on temporary fences.

8.4 When the temporary fence is relocated due to construction activity reinstall those areas following the initial installation requirements per 8.1.

8.5 Alternate ways of installation may be determined on site with authorized personnel.

8.6 Anytime posts used to support a temporary fence are to be driven into the ground or set in concrete foundations, the area should be checked for underground utilities before starting any fence installation.

9. Keywords

9.1 construction fence; site enclosure; temporary barrier; temporary fence; temporary panels; temporary work zone fence