OREGON OCCUPATIONAL SAFETY AND HEALTH DIVISION
DEPARTMENT OF CONSUMER AND BUSINESS SERVICES

PROGRAM DIRECTIVE

Program Directive A-21
Issued January 1, 1979
Revised May 29, 2018

SUBJECT: Ladders: Manhole Steps in Manholes

AFFECTED CODES/DIRECTIVES: Division 2/D, 1910.24, Step Bolts and Manhole Steps
Division 2/D, 1910.23, Fixed Ladders

PURPOSE: To clarify the applicability of 1910.24(b), Manhole Steps, where employees use manhole steps in walls and conical top sections of manholes.

BACKGROUND: Personnel had previously been using the suggested design in Figure D-2 of repealed rule 437-002-0027(3)(a), Fixed Ladders, in Division 2/D as the overall design criteria for individual fixed rungs (individual-rung ladder) installed in the walls and conical top sections of manholes. On May 16, 2017, Oregon OSHA adopted extensive changes to the Walking-Working Surfaces rules for general industry. These changes became effective on Nov. 1, 2017, replacing the previous Walking-Working Surface regulations in Division 2/D, which included new language addressing manhole steps in all manhole structures.

A. The American Society for Testing Materials (ASTM) specifications for “Precast Reinforced Concrete Manhole Sections,” C-478, specifies wall thicknesses according to design requirements, thereby approving walls as thin as four inches, which precluded the six-inch embedment previously suggested in Figure 2 of repealed rule 437-002-0027(3)(a). Figure 2 was replaced by Figure D-4 of the current rule, 1910.23(d), Fixed Ladders. The current Figure D-4 does not specify an embedment value for rungs in a fixed individual rung ladder. Additionally, Figure D-4 describes “individual rung ladders” as defined in 1910.21(b). That definition specifically excludes manhole steps. Appurtenances penetrating the manhole walls are forbidden, thus at least three-inch embedment for individual rungs or steps is reasonable.

ACTION:

A. Compliance officers will enforce Division 2/D, 1910.24(b), Manhole Steps in all instances where employees use manhole steps in manhole structures. When fixed ladders as defined by 1910.21(b) are used instead of manhole steps within a manhole, Compliance Officers will enforce Sections (b) and (d) of Division 2/D, 1910.23 Ladders.
B. Inspect individual steps used for access or egress, embedded in walls of risers or the conical top sections of manholes. Assure that they are well constructed, and maintained in a safe condition.

C. Manhole steps installed on or after Jan. 1, 2018 that are not designed to prevent the foot from sliding off the end is a violation of 1910.24(b)(2)(vi). For manhole steps installed before Jan. 1, 2018, that were not designed to prevent the foot from sliding off the end, consider 1910.24(b)(3).

D. Do not allow the use of manhole steps found to be unsafe due to corrosion. Cite 1910.24(b)(3) if the conditions warrant it.

EFFECTIVE DATE: This directive is effective immediately and will remain in effect until cancelled or superseded.

History: Issued 1-1-1979 Revised 5-9-2000 and 5-29-2018