



DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ATLANTIC
6506 HAMPTON BOULEVARD
NORFOLK VA 23508-1278

11163
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17 May 24

From: Commander, Naval Facilities Engineering System Command, Atlantic
To: Commanding Officer, Naval Ordnance Safety and Security Activity (N41)

Subj: STANDARD DRAWINGS CONTAINERIZED LONG WEAPONS STORAGE (CLWS)
MAGAZINE, DEPARTMENT OF DEFENSE EXPLOSIVE SAFETY BOARD
EXPEDITED APPROVAL REQUEST

Encl: (1) CLWS Standard Drawings, Naval Facilities Engineering Command Drawing Numbers
12905820 thru 12905870
(2) NAVFAC EXWC Calculations dtd 1 Apr 2024
(3) NAVFAC EXWC Technical Report & Endorsement Letter dated 1 May 2024

1. Submitted, recommending approval of the standard drawings for the single bay configuration of the Containerized Long Weapons Storage (CLWS) Navy Earth Covered Magazines. This is an update of the standard design for 7-bar Earth-Covered Magazine (ECM) for storage of large munitions with new reference drawings. There are a number of minor, cosmetic changes to the drawing set related to the formatting/display of the drawings (e.g., movement of dimensions to not overlap with other callouts), which are not considered to affect the design of the magazine. In addition, no changes which affect lightning protection have been made. See enclosure (1) for magazine drawings.

2. NAVFAC Expeditionary Warfare Center (EXWC) requested minor modifications that affected protective construction. EXWC provided calculations supporting these changes. See enclosure (2) for calculations. These changes include:

a. A2, B4, B5, C4/S-502 and C5, D5/E-504. The layout of the reinforcement in the headwall has also been updated, such that the outer-most layer of bars are oriented in the horizontal direction, while the inner-most layer of bars are oriented in the vertical direction. This was done to eliminate a conflict between the horizontal headwall reinforcement and vertical pilaster reinforcement, which was not considered to be constructible in a manner consistent with the original design and analysis.

b. A2, C2/S-702. The clear distance between the blast door weld access holes and top of the blast door has been updated from 4-1/8" to 6-5/8" to avoid overlap with the perimeter channels. The width of the outermost door cover plates were increased or decreased by 1/16" to align the inter-plate seams with the center of the door stiffeners/channels.

c. C1, C3/S-703. The length of the pieces of expanded metal mesh installed in the concrete infill within the blast door has been updated from 46" to 45-1/4" to provide 1" gap between adjacent pieces, and to avoid overlap of the mesh at the top and bottom perimeter channels. All of these changes are due to dimension errors in the original drawing sets, and the adjustments align the design with the intended configuration in the original design and analysis.

3. NAVFAC EXWC review of the updated plans has been completed and confirms design is acceptable from a blast-resistant design standpoint, and recommends approval of the magazine for inclusion in Department of Defense Explosives Safety Board (DDESB) TP-15 as a standard 7-bar Earth-Covered Magazine. See enclosure (3) for NAVFAC EXWC Technical Report & Endorsement Letter.

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4. Our point of contact is Mr. John Wells, john.t.wells55.civ@us.navy.mil, DSN 262-4234, or commercial (757) 322-4234.

R. S. TYLER
By direction