

## Key References and Source Documents for the Study of Modern US Defenses

Prepared by Mark A. Berhow

Thirty years ago, there was very little available on the history of general United States seacoast/continental defense. Most of the material of interest lay in buried in the National Archives holdings, or in increasingly rare collections of old army publications on the bookshelves of some major libraries. Since then there has been a great expansion of original works, reprints, and photocopies of material on this subject, that make it possible to build a good general reference collection in personal or public libraries.

This is a list of some of the publications and source documents used by researchers in the study of US Army defenses (1781-1976). This is from information I have compiled over the years and is by no means complete. I do not cover publications that deal with specific localities, concentrating on the general references. I have attempted to give a brief description of what these sources are, besides just giving a title. Most importantly, several of the publications in this list are currently available from publishers and the ordering information is available on the web. Original copies of the some of material listed here can only be found at the National Archives. Some of these sources, especially the out of print books and manuals, can also be found at the Military History Institute at Carlisle Barracks and in the holdings of major city and university libraries which are designated repositories for Federal records.

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To start with, here are six general works that provide a solid overview of all the defensive works built and utilized by the United States government during the time frame of 1781-1978 (I personally consider the fixed permanent US Army air defense systems of 1950-1978 to be a logical successor to the guns of the US Army Coast Artillery). These books are currently in print and can be ordered directly from the publishers. All of these works contain excellent bibliographies. They are a great place to start your research on this fascinating subject.

### Introductory Works:

*Seacoast Fortifications of the United States, an Introductory History*, by Emanuel R. Lewis, Naval Institute Press, Annapolis, MD 1970, 1992. The one and only general history of seacoast defenses of the United States. This short text of 145 pages is well written and profusely illustrated. The book covers the entire history of United States seacoast artillery defense. Lewis discusses defense traditions, tactics and techniques in the introduction, then goes on discusses the US seacoast fortifications in the body of the book-the colonial beginnings, the First, Second and Third Systems, the Civil War years and after, the modern era construction of the Endicott, Taft, post WW I, and the WW II programs, and the remnants that remain today. Paperback is currently available from the Naval Institute Press, [www.nip.org](http://www.nip.org).

*Defending America's Coasts 1775-1950*, by Dale E. Floyd, Office of History, United States Army Corps of Engineers EP 870-1-57, Alexandria, VA, Government Printing Office, Washington, DC, 1997 (paperback, available from Office of History, U.S. Army Corps of Engineers. This is an excellent general bibliography of books, manuals, and articles written about US seacoast defenses. A previous version of this work, *United States Coast Defense, 1775-1950*, (EP 870-1-15), 1985 is available at some libraries.

*The CDSG Publications CD ROM*: The CD ROM contains all the back issues of the *CDSG News/Journal/Newsletter* (Volumes 1-15) in the PDF format. It also has searchable index to volumes 1-5 and a complete set of tables of contents to the remaining volumes. A second CD ROM contains a number of other documents including: Revised list of Military Reservations and Concrete Batteries 1890-1950; Revised list of Surviving American Seacoast Artillery Weapons; The Evolution of Our System of Position Finding and Fire Control (1913); Mimeograph No.39: Searchlights (1901); 25 Kw. Gasoline driven Generator Sets in seacoast defense(1917).; Lists of titles of Army Field Manuals (FMs), Technical Manuals (TMs), and Ordnance Department Documents (ODDs): Scanned Confidential Blue Print harbor, reservation, and detail (D) maps (various dates and locations 1916-1945, over 300 maps) gun battery drawings (from RCWs) (nearly 200); U.S. Army Coast Artillery Organization 1901-1945. Available from the CDSG Press

*A Legacy in Brick and Stone: American Coastal Defense Forts of the Third System 1816-1867* By John R. Weaver II, Pictorial Histories Publishing Co., Missoula, MT, 2001. This fine work provides an introduction to the

brick and stone forts of the American Third System harbor defense fortifications built between 1816 and 1867. The book begins with a study of the history of the Coastal Fortifications Board, which developed and implemented this massive defense project. It then details the art of fortification of that period and describes the particular architectural components that were key to their design. Approximately two-thirds of this volume is dedicated to an illustrated fort-by-fort description of the system. Available from the publisher or directly from the author.

*American Seacoast Defenses, a Reference Guide*, Mark A. Berhow, ed., CDSG Press, Bel Air, MD 1999 A general reference work on some of the specific details of the modern United States seacoast defenses (1890-1950) with sections on source documents, maps, fire control, mines, guns & emplacements, etc. It includes a comprehensive list of the sites where modern-era seacoast batteries were built. Available in paperback from the CDSG Press.

*Rings of Supersonic Steel: Air Defenses of the United States Army 1950-1979*; an introductory history and site guide, By Mark L. Morgan and Mark A. Berhow, Second Edition, 2001, Draft Edition available directly from Author Mark Berhow (publication of a paper back edition is planned soon!) This work covers the development and deployment of US Army air defense gun and missile systems, including Nike-Ajax, Nike Hercules, BOMARC, and the Safeguard anti-ballistic missile system. The bulk of the work is a comprehensive guide listing all the sites where these systems were deployed. A CD ROM version of this draft also contains a number of other references works from the US Government which are no longer in print but available in PDF format. Contact Mark Berhow (berhowma@home.com) for information on this book.

### **Reprints of Key Historical Works on Seacoast Fortification from the CDSG Press**

*Notes on Seacoast Fortification Construction*, by E.E. Winslow, Occasional Papers No. 61, Engineering School, United States Army, Govt. Pub. Office, Wash. DC 1920, reprinted CDSG Press, Bel Air, MD, 1994. An excellent primary source which surveys the construction of the early modern United States seacoast defenses (1880-1920), by an officer involved in the construction. The book discusses the historical background of seacoast fortifications, armor and armament, material used in construction of emplacements, ammunition supply and service, general design and details of the emplacements, ventilation, blast effects, electrical service, fire control, searchlights, and submarine mining. A hardcover reprint, with a separate paperback containing reproductions of the plates

*The Service of Coast Artillery*, by Frank T. Hines, and Franklin W. Ward, Goodenough & Woglam Co., New York, 1910, reprinted by the CDSG press, Bel Air, MD, 1997 (hardcover, available from the CDSG Press, www.cdsg.org). This text was prepared by two coast artillery officers and intended for new officers in the Coast Artillery Corps. It provides basic information on the weapons, tactics, and doctrine of the service dedicated to manning the seacoast defenses including definition of terms, theory and principles, organization and personnel, gunnery and ballistics, armament, projectiles, instruments, searchlights, submarine mining, engineering, and tactics.

*American Coast Artillery Materiel* (Ordnance Department Document No. 2042), Govt. Printing Office, Washington, D.C., 1923. An army publication that discusses and illustrates all the seacoast artillery weapons in use in 1922. This is one of the most comprehensive and profusely illustrated works on the specifics of early modern United States seacoast artillery weapons, though a number of weapons (obsolete by 1922) were left out. Sections include the history of the development of artillery, the design and manufacture of a 16-inch seacoast weapon, detailed descriptions of American seacoast guns and mounts, and several tables of weapon data.

*Seacoast Artillery Weapons*, War Department, Technical Manual TM 4-210, Govt. Printing Off., Washington, DC, 1944, reprinted by the CDSG Press, Bel Air, MD, 1995. This publication describes and illustrates the seacoast artillery weapons used during the World War II years. Sections include cannons, recoil mechanisms, carriages, searchlights, and data on the characteristics of American seacoast artillery weapons.

*Permanent Fortifications and Sea-Coast Defenses*: Congressional Report No. 62, U.S. House of Rep. (1862), Report of the Committee on Military Affairs. In 1862, the 37th Congress of the United States, Committee on Military Affairs (now known as the Armed Services Committee) monitored the conduct and financing of the Union war effort. Permanent Fortifications and Sea-Coast Defenses (House of Representatives Report No. 86) reprinted a number of the important previous reports dealing with fortifications from various time periods including the best known one, Chief Engineer Joseph G. Totten's 1851 report. These reports informed

Congressmen and Senators of accomplished work, the fortifications' value and future requirements; they were basically narrative reports, with accompany charts and listings on subjects such as the fortifications erected at each site. "Permanent Fortifications" is the best one-volume source for information and explanation of "Third System" coastal fortifications.

### Key Reports (Modern era):

*Report of the Board on Fortifications or other Defenses Appointed by the President of the United States under the Provisions of the Act of Congress Approved March 3, 1885*, House Executive Document No. 49, 49th Congress, 1st session (2 volumes, GPO, Washington D.C., 1886). This is the start of the modern era of the United States coastal defenses. This board report, known as the Endicott Board report, reviewed the state of American harbor defenses in 1885 and recommended a completely new system of harbor defenses based on the emerging technology of rifled breech loading cannons and armor. The major harbors of the United States were ranked in terms of military and economic importance. When Congress began to appropriate money for the construction of the new defenses in the late 1880s, this report was cited as the authorization source for the harbors to be defended.

*Report of the National Coast Defense Board . . . on the Coast Defenses of the United States and the Insular Possessions*, Senate Document No. 248, 59th Congress 1st Session (GPO, Washington D.C., 1906) This report, known as the Taft Board Report, surveyed the progress in harbor defenses made since the Endicott Report and recommended a number of technical improvements. It also recommended the fortification of key harbors in the newly acquired overseas possessions such as Hawaii and the Philippines. Note: the fortification of entrances to the Panama Canal was authorized in the Spooner Act of 1902.

*Report of the Board of Review of the War Department to the Secretary of War (November 26, 1915) on the Coast Defenses of the United States, the Panama Canal, and the Insular Possessions*, House Document No. 49, 64th Congress, 1st Session (G.P.O., Washington D.C., 1916). This report marks the beginning of the transition from the disappearing guns as the major weapon in American harbor defenses to the longer range 12- and 16-inch barbette carriage guns of the post World War I era.

Memo "Harbor Defenses," War Plans Division, Office of the Assistant Chief of Staff, 8 Mar 1923, War Plans Division 1105. 18 pages. "This study, approved 17 Apr 1923, remained the basic definition of War Department policy with respect to Harbor Defenses until the eve of WW II." (Note 2, page 45 in: *Guarding the United States and its Outposts, the US Army in WW II, The Western Hemisphere*, by Conn, Engleman & Fairchild, Center of Military History, US Army, GPO, Washington, DC, 1989).

Memo "Harbor Defenses in the Continental United States," War Plans Division, Office of the Assistant Chief of Staff, 6 Aug 31, AG 660.2 (9-30-31) War Plans Division 1105-55, 9 pages. This memo resulted in the creation of the Harbor Defense Board.

Documents pertaining to the 1940 Modernization Program for the Continental United States. This is some of the correspondence during study of Harbor Defense Board that was used to as the blueprint for the 1940 Harbor Defense Modernization Program (also known as the World War II Construction Program). The July 27, 1940 letter recommending the building of "twenty-seven 16-inch batteries and fifty 6-inch batteries at major harbors around the continental United States," is a key document. Additional overseas construction (Alaska, Canada, Panama, Hawaii, and the Caribbean) were added later, some as separate programs. Other letters were the official army authorization for various parts of the program.

US War Department, Letter: "Abandonment of Harbor Defense Posts no longer required for Sea Coast Defense," Harbor Defense Board, President, AG 602 (7-27-40) M, 6 pages, Exhibit A (12 pages), Exhibit B (2 pages) (National Archives RG 407, Entry 360, Class. 602, Box 958).

US War Department, Letter: "Modernization of Harbor Defense Projects, Continental United States," AGO, AG 660.2 (9-16-40) M-WPD-M 26 Sept. 1940.

US War Department, Letter: "Revision of Anti-Aircraft Annexes, Harbor Defense Projects," AGO, AG 660.2 (10-23-40) M-OCCA 1 Nov. 1940.

US War Department, Letter: "Surface Craft Detectors, SCR 296," AGO, AG 413.68 (5-4-42) WC to the CG WDC 3 Nov. 1941.

US War Department, Letter: "Defense of Harbors Against Motor Torpedo Boats AGO AG 660.2 (12-12-42) MSC-E to the CG WDC, 21 Feb 1942.

US War Department, Letter: "Radio Set SCR-582 Central Surveillance Detector," AGO AG 413.44 (12-12-42) MC to the CG WDC 13 May 1942.

US War Department, Letter: "Revision of Underwater Defense Projects," AGO, AG 660.3 (9-29-42) OB-S-E 20 Oct. 1942.

US War Department, Letter: "Defenses of Harbors Against Motor Torpedo Boats," AGO, AG 660.2 (4-12-43) OB-S-SPDDO-M, 17 Sept. 1943.

### **Annual Reports (Congressional Records)**

These are often cited in CDSG Journal articles. These reports are part of the public record and the ones from the War Department are of particular interest to modern day researchers. These can be found at all major public libraries that are Federal record repositories. Some of the reports are separately bound.

Annual Report of the War Department

Annual Report of the Chief of Engineers

Annual Report of the Chief of Ordnance

Annual Report of the Chief of Artillery, Chief of Coast Artillery

### **Army Record Books from Harbor Defense Installations**

The National Archives Record Group 392 includes four classes of record books that are from coast defenses installations. These were the official record books maintained at the various sites, with information on commanders, names of sites, and fire control systems. They are: Battery Emplacement Books, Fort Record Books, Fort Record Book Files (supplements to the Fort Record Books), Mine Command Record Books.

### **Histories of the Defense Commands during WW II.**

These typescript documents were prepared by the defense commands following WW II. They contain a wealth of information on Coast Artillery troop deployments on the east, gulf and west coasts during the war. Never formally published, only a few copies of each have survived in the military libraries.

History of the Eastern Defense Command

History of the Southern Defense Command

History of the Western Defense Command (Photocopies of HWDC Volumes 1-5 available from the Fort MacArthur Military Press.)

### **Coast Artillery Drill Regulations, United States Army: 1898, 1906, 1909, 1914.**

Drill regulations for the coast artillery appeared after the development of fire control procedures beginning in 1894. Several book bound editions were printed.

### **Manual for Submarine Mining, 1898, 1912, 1926, 1930**

A manual of procedures for the handling of submarine mines was also developed 1890s. It was revised several times as well. The 1930 manual was TM 2160-20 (see TMs, below)

### **Training Regulations (separate series, TR 435 coast artillery) 1920's.**

These individually printed chapters replaced the book-bound "Drill Regulations" in the 1920s. These "TRs" were designed to be assembled into binders and could be "custom assembled" based on the interests of the individual officer or enlisted man.

### **Field Manuals (1940-1945)**

In 1940, the training regulations were overhauled, redone and printed as Field Manuals (FM) and Technical Manuals (TM), all part of the Army Manual system. What follows is a list of FMs from FM 4-155 (1940) and a list of revisions printed in the mid 1940s from the Army Ordnance Museum at Aberdeen Proving Grounds, Maryland. A fairly complete set of original FMs and TMs are housed at Carlisle Barracks.

Some abbreviations include: SOP- service of the piece, IMUC-instructions for mounting, using and caring for, AA- antiaircraft artillery, D-description.

FM 4-5 Organization and Tactics  
 FM 4-6 Tactics and Technique of Controlled Submarine Mines, Buoyant  
 FM 4-7 Tactics and Technique of Controlled Submarine Mines, Ground  
 FM 4-10 Gunnery  
 FM 4-15 Fire Control and Position Finding  
 FM 4-19 Examinations for Gunners  
 FM 4-20 Formations, Inspections, Service, and Care of Material (retitled "Firing  
 Preparations, Safety Precautions, Care and Service of Material" in 1943)  
 FM 4-24 Service of the Piece (SOP), 155 mm Gun M1  
 FM 4-25 SOP, 155 mm Gun M1917 & M1918  
 FM 4-29 Service of the Seacoast Searchlight  
 FM 4-30 Service of the Gun Data Computer M1  
 FM 4-32 Service of the Base-End Data and Gun Data Transmission Systems  
 FM 4-35 SOP, 14-inch Gun M1920MII on Railway Mount M1920  
 FM 4-40 SOP, 12-inch Mortar, Railway Artillery  
 FM 4-45 SOP, 12-inch Gun Railway Mount M1918, Railway Artillery  
 FM 4-48 SOP, 8-inch Gun, MkVI, Mod. 3A2, on Barbette Carriage M1  
 FM 4-49 SOP, 8-inch Gun, MkVI, Mod. 3A2, on Railway Mount M1A1  
 FM 4-50 SOP, 8-inch Gun, Railway Artillery  
 FM 4-51 SOP, Operation and Care of Railway Artillery Equipment  
 FM 4-55 SOP, 12-inch Mortar (Fixed Armament)  
 FM 4-60 SOP, 12-inch gun, Barbette Carriage  
 FM 4-61 SOP, 12-inch Gun, Casemated Mount  
 FM 4-65 SOP, 10-inch Gun, Disappearing Carriage  
 FM 4-70 SOP, 6 inch Gun, Disappearing Carriage  
 FM 4-74 SOP, 6-inch Gun M1903A2 or M1905A2, on BC M1 or M2 and 6-inch Gun M1  
 on BC M3 or M4  
 FM 4-75 SOP, 6-inch Gun, Barbette Mount M1900  
 FM 4-80 SOP, 12-inch and 14-inch Disappearing Carriages  
 FM 4-85 SOP, 16-inch Gun and Howitzer  
 FM 4-86 SOP, 16-inch Gun Casemated Mount  
 FM 4-90 SOP, 3-inch Rapid-Fire Mount  
 FM 4-91 SOP, 90 mm Gun M1, on Mount M3  
 FM 4-97 Service of the Radio Set SCR 682-A

*Coast Artillery Field Manuals- Antiaircraft Artillery*

FM 4-100 AA: Organization and Tactics (1943)  
 FM 4-105 Organization and Tactics, Antiaircraft Artillery (1940)  
 FM 4-110 Gunnery, Fire Control, and Position Finding, Antiaircraft Artillery Gun  
 FM 4-111 Position Finding and Fire Control, Antiaircraft Artillery Searchlights  
 FM 4-112 Gunnery, Fire Control and Position Finding, AA automatic weapons  
 FM 4-115 Operation of Material and Employment of Personnel, AA Searchlight Units  
 FM 4-119 AA: Examination for Gunners  
 FM 4-120 Formations, Inspections, Service and Care of Material, AAA  
 FM 4-121 Fire Control Guns  
 FM 4-125 SOP, 3-inch Antiaircraft Artillery Gun  
 FM 4-126 AA: SOP—90 mm AA Gun on M1A1 Mount  
 FM 4-127 AA: SOP—90 mm Gun M2, on Mount M2  
 FM 4-128 AA: SOP—4.7-inch AA gun  
 FM 4-130 SOP, 105 mm Antiaircraft Artillery Gun  
 FM 4-135 Marksmanship and SOP, Antiaircraft Artillery Machine Gun  
 FM 4-140 SOP, 37 mm Antiaircraft Artillery Gun  
 FM 4-142 Service of Height Finders M1 & M2  
 FM 4-143 Service of Height Finder SCR-547  
 FM 4-144 AA: Service of Radio Set SCR-584  
 FM 4-146 AA: Service of Radio Set SCR-545  
 FM 4-150 Exam for Gunners  
 FM 4-155 Reference Data (Seacoast Artillery and Antiaircraft Artillery) (1940)

FM 4-155 SOP Caliber .50 AA Machine Gun  
 FM 4-160 Coast Artillery Training  
 FM 4-176 Service of Radio Set SCR-268  
 FM 4-181 Employment of Barrage Balloons  
 FM 4-182 Barrage Balloon Technique  
 FM 4-183 AA: Barrage Balloon Control  
 FM 4-184 AA: Barrage Balloon Site Installations  
 FM 4-187 AA: Barrage Balloon, Service of the Balloon and Balloon Equipment,  
                   Very Low Altitude  
 FM 4-188 Service of the Balloon and Balloon Equipment, very Low Altitude  
 FM 4-191 Barrage Balloon, Service of Cable Armament, Low Altitude  
 FM 4-192 AA: Barrage Balloon, Service of the Cable Armament, Low Altitude  
 FM 4-192? AA: Barrage Balloon, Gas Generation, Use, Purification,  
                   and Service of Hydrogen Generator  
 FM 4-196 Barrage Balloon, Rigging and Fabric Repair  
 FM 4-198 Barrage Balloon, Reference Data

### Technical Manuals (193?-194?)

These manuals were usually for specific items of equipment or supply. This list is derived from the listing of manual changes obtained from the Army Ordnance Museum. This list only has those entries pertaining to fixed (and some mobile) seacoast artillery material.

TM 4-205 Coast Artillery Ammunition  
 TM 4-210 Seacoast Artillery Weapons  
 TM 4-220 Controlled Submarine Mine Material  
 TM 4-234 Antiaircraft Artillery Target Practice  
 TM 4-235 Seacoast Artillery Target Practice 182, 1.1.44  
 TM 4-237 Radio-Controlled Target (JR) Boat  
 TM 4-238 Coordinate Conversion Tables  
 TM 4-245 Preservation and Care of Seacoast Defense Material  
 TM 4-305 CA Gunners Instruction, Fixed Seacoast Artillery, 4.10.42  
 TM 4-310 Gunners Instruct., Fixed Seacoast Art., Expert , 1.27.42  
 TM 4-315 Gunner's Instruct., Mobile Seacoast Artillery, 1st & 2nd Class Gunners  
 TM 4-320 Coast Artillery Gunner's Instruction

### Selected TM 9s

TM 9-235 37 mm AA Material  
 TM 9-252 40 mm AA Material  
 TM 9-252 40 mm Auto, Gun M1 & 40 mm AA gun Car. M2, 141 pp, 4.15.42  
 TM 9-345 155 mm Gun Material M1917, M1918 & Modifications (1942)  
 TM 9-370 90 mm Antiaircraft Gun Material,  
                   retitled - 90 mm Gun M1A1 on Mount M1A1  
 TM 9-371 90 mm Gun M1 and 90 mm Antiaircraft Gun Mount T2E1  
 TM 9-372 90 mm Gun M2 and 90 mm Antiaircraft Gun Mount M2  
 TM 9-373 90 mm Gun M1 and 90 mm Gun Mount M3  
 TM 9-421 3-inch Seacoast Material (1942)  
 TM 9-424 6-inch Seacoast Material: Gun M1900 mounted on Barbette Carriage M1900  
 TM 9-428 6-inch Seacoast Material: Gun M1903A2 & M1905A2 mounted on Barbette  
                   Carriage M1, retitled Gun 6-in M1903A2 & M1905A2 Carriage Barbette M1,  
                   Gun 6-inch M1 Carriage M3, power plant M4  
 TM 9-429 6-in Seacoast Material: Gun T2 and Barbette Carriages M3 & M4, retitled Gun  
                   6-in M1903A2 & M1905A2 Carriage Barbette M2, Gun 6-in M1 Carriage M4,  
                   power plant M4  
 TM 9-442 8-inch Seacoast Material: Gun MkVImod3A2, Barbette Carriage M1  
 TM 9-251 12-inch Gun M1895M1A4 on Barbette Carriage M1917, Power Plant M2  
                   (1945)  
 TM 9-452 12-inch Seacoast Material: Power Plant and Auxiliary Equipment for  
                   Barbette Carriage M1917

TM 9-456 12-inch Seacoast Material, Mortar M1890M1/Carriage M1986M1 & MII 1942  
 TM 9-457 12-inch Seacoast Material, Mortar M1908 mounted on Mortar Carriage M1908  
 TM 9-458 12-inch Seacoast Material, Mortar M1912 mounted on Mortar Carriage M1896MIII  
 TM 9-463 8-inch Gun MkVImod3A2 on railway mount M1A1  
 TM 9-471 16-inch Seacoast Gun Material: Gun MkIIMI on Barbette Carriage M4  
 TM 9-471-1 16-inch Seacoast Gun Material: Gun MkIIMI on Barbette Carriage M5  
 TM 9-472 16-inch Seacoast Gun Material: Gun M1919MII, MIII on Barbette Carriage M1919  
 TM 9-472-1 16-inch Seacoast Gun Material: Gun MkIIMI on Barbette Carriage M2 & M3  
 TM 9-472 Power Plant M1: for 16-inch Gun MkIIMI on Barbette Carriage M4 & M5  
  
 TM 9-500 (U500) - 541(U540) various Telescope Mounts  
  
 TM 9-U542 Range Finder Mount M62  
 TM 9-U543 Range Quadrant M3 & M8  
 TM 9-U544 Range Quadrant M4, M5, & M6  
 TM 9-U545 Range Quadrant M10C, D  
 TM 9-U546 Elevatin Quadrant M1  
 TM 9-U548 Azimuth Instrument M1910M1  
 TM 9-U549 Azimuth Instrument M1918A2, M1  
 TM 9-U550 Azimuth Instrument M2A1  
 TM 9-U551 Observation Instrument A.A.B.C. M1  
 TM 9-U552 Bracket Fuze Setter M1916M2  
 TM 9-U556 Computing Sight M13  
 TM 9-U559 Telescope Mount M69  
 TM 9-U560 Depression Position Finder M1, M2, M2A1  
 TM 9-U561 Spotting Board M3  
 TM 9-U562 Plotting Board M3 & M4  
 TM 9-U563 Plotting and Relocating Board M1  
 TM 9-616 Generating Unit M5 & M6  
 TM 9-617 Generating Unit M18  
 TM 9-618 Generating Unit M7, M7A1, M15, M15A1  
 TM 9-623 Height Finder M1 & M1A1  
 TM 9-624 Height Finder M2  
 TM 9-627 Cable System M12 and off-carriage components of the remote control system M14 (for 6-in Barbette Carriages M2 & M4)  
 TM 9-659 Directors M5, M5A1, & M6  
 TM 9-659-1 Directors M5A2, & M5A3  
  
 TM 9-1345 Maintenance—155 mm Guns, M1917, M1917A1, & M1918M1; Carriages M1917, M1917A1, M1918, M1918A1, M2 & M3; limbers, M1917, M1917A1, M1918, M1918A1, & M3  
 TM 9-1370A Maintenance—90 mm Gun M1 and Mounts M1 & M1A1; Gun & Upper Carriage  
 TM 9-1370B Maintenance—90 mm Gun M1 and Mounts M1 & M1A1; Lower Carriage  
 TM 9-1371 Maintenance—90 mm Gun M1 and Mount M3  
 TM 9-1401 Repair of Submarine Mine Cases  
  
 TM 9-1500s & 1600s Maintenance—Sights, telescopes, quardants, Range finders, sighting Systems, Periscopes, Generating Units, Height Finders, Fuze Setters, Remote Control Systems, Gun Data Computers, Directors, Data Transmission Systems, Azimuth Insturments, Depression Position Finders, Sound Locators, Etc. Examples:  
 TM 9-1570 Plotting Boards for Seacoast Artillery (1942)  
 TM 9-1585 Range Finders, Short Base Coincidence Types  
 TM 9-1647 Data Transmission Systems for Seacoast and Railway Artillery  
 TM 9-1653 Data Transmission System M6 (for 90 m AA gun Mount M1)

TM 9-1675	Azimuth Instrument M1910 & M1910A1
TM 9-1680	Azimuth Instrument M1918 & M1918A2
TM 9-1685	Depression Position Finder M1907
TM 9-1695	Depression Position Finder M1
TM-9-2005	Ordnance Material-General, Dec. 1943 (in 7 volumes)
TM 9-2300	Standard Artillery and Position Finding Equipment, Feb. 1944 (Artillery Material and Associated Equipment)
TM-9-2305	Fundamentals of Artillery Weapons, Sept. 1947
TM 9-2601	Instruction Guide: Elementary Optics & application to Fire Control Instr.
TM 9-2681	Instruction Guide: Plotting Boards M3 & M4
TM 9-2682	Instruction Guide: Spotting Board M3
TM 9-2683	Instruction Guide: Plotting Board M5
F190-W1	Data Transmission Systems

### Ordnance Department Documents.

This list was derived from Ordnance Department Document (ODD) No. 1467 "List of Blanks, Pamphlets, etc." The first section is a list of the headings found in the ODD No. 1467, the second section is a list of those ODDs that pertain to Coast Artillery. For a more complete list, the researcher is referred to ODD 1467. Again, a fairly complete collection of these documents are in the holdings of Carlisle Barracks and at the National Archives in RG-287 (Records of the Government Printing Office).

Note: gun carriage titles in this listing indicate only the carriage model. The full title carries the designation of the gun models that were mounted in these carriages.

Abbreviations: IMUC-Instructions for Mounting, Using and Caring for; DU-Description and Use; (years printed, R = reprint) for carriage abbreviations, see Concrete Battery Guide on page 149.

#### List of topics in ODD 1467

1-400	Property returns, invoices, receipts, vouchers, requisitions
401-600	Specifications, Instructions to bidders, contracts, bonds
800-1033	Target firing, etc.
1034-1177	Inspection and Proof reports
1185-1273	Progress Reports
1274-1358	Civil Service Blanks
1369-1379	Personal Reports of Officers
1417-1422	Bonds
1467-1651	Ordnance Office Forms
1656-2200	Pamphlets, etc., descriptive of guns, carriages, & other Ordnance materials
2229-2512	Forms for specific Ordnance Stations
2534-2787	Miscellaneous
3020-4020	Additional Specifications and Inspection Reports
1-33, 320-364	War Department Standard Forms

Titles from ODDs 1656-2200—Pamphlets, etc., descriptive of guns, carriages, and other Ordnance material:

1006	Self-Propelled Caterpillar MkII for 155 mm Gun M1918MI (1920)
1022	IMUC 6-inch BC Model of 1900 (1920) see also #1688
1023	IMUC 10-inch M1900, DC M1901 (1907, 1920R) see also #1694
1024	IUC 12-inch Mortar Carriages M1896MI & M1896MII, revised (1916)
1040	Reloading Outfits for .30 cal. gallery . . . M1919 (1920)
1060	3-inch AA Gun Mount M1917 (superseded #1808) (1926)
1067	AA Truck Mount M1917 for the 75 mm Field Gun of 1916 (1921)
1074	155 mm Motor Carriage M1920 (1922)
1075	IMUC 12-inch Mortar Carriage Model of 1896 MI, MII
1078	"Caterpillar" Adapters for 8-in Howitzers and 155 mm Carriages (1922)

1091 Proof Firing of Artillery Material (1905, 1906, 1908, 1916, 1919)  
1110 Artillery Cart M1918 & .... (1922)  
1607 Plotting Boards for Mobile Artillery M1905 & M1906  
1647 IMUC 12-inch DCLF M1901 (190?)  
1654 Periscopic Azimuth Instrument M1918 (1918)  
1655 Azimuth Instruments M1918 (1918)  
1656 Azimuth Instrument, Warner & Swasey M1910 DIU (1907, 1911, 1912, 1917R)  
1657 IMUC Azimuth Instrument, M1900 & M1900M1  
(1905, 1906, 1909, 1907, 1912, 1917R)  
1658 Ammunition, Blank Inst for Prep & Use (1908, 1914, 1915)  
1659 Handbook of 3-inch Gun Material ((1905, 1906, 1908, 1911, 1912, 1915, 1917)  
1660 Handbook of 3.2-inch field battery (1902, 1908, 1911, 1914, 1917R)  
1661 Handbook of 5-inch siege gun battery (1903, 1914, 1917R)  
1662 Handbook of Material for 7-inch Siege Howitzer Battery (1900, 1914. 1917R)  
1663 Descrip. Pratt Range Board M1905 (1908, 1915, 1917)  
1664 Plotting Board with Zinc Top DU (1901)  
1665 IMUC Breech Mechanism for Seacoast Cannon M1888, 1895  
(1899, 1902, 1904, 1905, 1907, 1908, 1912, 1917R)  
1665? Description of 8, 10, 12, 14, and 16-inch Seacoast Guns ...  
1666 Deflection Board M1905 (1906, 1908, 1912, 1917, 1918)  
1667 Description of the Plotting Boards for Mobile Artillery (1906, 1908, 1911)  
1668 Desc. Deflection Board M1906 for 12" Mortar (1907, 1908, 1917)  
1669 IMUC Whistler Hearn Plotting Board M1904, M1906, M1906 MI,  
& Submarine Plotting Board M1906 (1907, 1909, 1917R, 1918R)  
1670 Fire Commander's Plotting Board M1906 (1908, 1917R)  
1671 Musketry Rule M1917 (1917)  
1672 360 Degree Mortar Plotting Board M1911 Desc. (1912, 1917R)  
1673 110 Degree Plotting Board M1915 (1916, 1917R, 1922R)  
1674 Range Board M1909 (1913, 1919)  
1675 Mortar Range Board M1914 (1914, 1916)  
1676 Table of US Army Cannon and Projectiles  
(1904, 1906, 1910, 1913, 1915, 1918, 1924)  
1678 Cannon, Firing and Breech Mechanisms Field, Siege & Seacoast (1915, 1917)  
1680 Handbook of the 5-inch and 6-inch Carriages M1917, Type A, Limbers, Wagons,  
Guns (1918)  
1682 Description & Instructions for Use . . . Boulenger Chronograph (1902, 1917)  
1683 IMUC 5-inch BC M1896 Bal. Pillar Mount (1900, 1917R)  
1684 IMUC 5-inch BC, Model of 1903 (1905, 1908, 1911, 1917R)  
1685 IMUC 8-inch M1888, BC M1892 (1904, 1907, 1917R)  
1686 IMUC 6-inch M1897, DCLF M1898 (1900, 1904, 1911, 1917R)  
1687 IMUC 6-inch M1900, M1903, M1905, DCLF M1903 (1905, 1906, 1908, 1910,  
1917R)  
1688 IMUC 6-inch M1900, BC (Pedestal) M1900 (1904, 1907, 1912, 1917R, 1920R)  
1689 IMUC 8-inch M1888, DCLF M1894 (1898, 1903, 1908, 1916, 1917R)  
1690 IMUC 8-inch M1888, DCLF M1896 (1898, 1905, 1906, 1912, 1917R)  
1691 IMUC 10-inch M1888, DCLF M1894 (1900, 1904, 1913, 1914R, 1917R)  
1692 IMUC 10-inch M1895, DCLF M1896 (1897, 1904, 1908, 1912, 1916)  
1693 IMUC 10-inch M1895, DC ARF M1896 (1900, 1904, 1907, 1917R)  
1694 IMUC 10-inch M1895, M1900, DCLF M1901 (1907, 1917R, 1920R)  
1695 IMUC 12-inch M1888, M1895, DCLF M1896 (1898, 1904, 1913, 1917R)  
1696 IMUC 12-inch M1895, DCLF M1897 (1899, 1904, 1909, 1917R)  
1697 IMUC 12-inch M1888, M1900, DCLF M1901 (1903, 1904, 1908, 1911, 1917R)  
1698 IMUC 12-inch Mortar Carriage Model 1891 (1899, 1904, 1909, 1917R)  
1699 IMUC 12-inch Mortar Carriage Model 1896 (1897, 1898, 1901, 1905)  
1699 IMUC 75 mm gun M1897, on improvised M1917 carriage AA (1917)  
1700 IMUC 10-inch M1888, BC Model of 1893 (1906, 1908, 1912, 1916)  
1701 IMUC 3-inch 15 lb. Ped. Model of 1903 (1907, 1909, 1911, 1916, 1917R)  
1702 IMUC 12-inch M1888, BC Model of 1892 (1908, 1917R)  
1703 IMUC 6-inch M1905, DCLF M1905 (1908, 1909, 1917R)

1704 IMUC 6-inch DCLF M1905MI (1908, 1917)  
 1705 IMUC 12-inch Mortar M1890MI, Carriage M1896MI & MII  
 (1909, 1913, 1916, 1917R, 1921, 1922R)  
 1705A Supplement to Form #1705 (1914)  
 1706 12-inch Mortar Dummy M1912 (1912)  
 1707 IMUC 12-inch Mortar Carriage M1908 (1912, 1919)  
 1708 IMUC 15-Pdr Dummy Carriage M1912 (1912)  
 1709 IMUC 12-inch Mortar M1912, Carriage Model of 1896MIII (1913, 1917R)  
 1710 IMUC 10-inch Dummy DCLF M1912 (1912)  
 1711 IMUC 6-inch gun M1905, M1908, DCLF M1905MII (1914, 1917R)  
 1712 IMUC 14-inch M1910, DC Model of 1907 and 1907MI (1910, 1912, 1917R)  
 1712A Supplement to 1712 (1924)  
 1713 IMUC 6-inch M1908MIII, BC Model of 1910 (1914, 1917R, 1921)  
 1714 IMUC 3.6- & 7-inch Field Mortar M1895, 7-in M1892, 3.6-in M1890 (1915,  
 1917R)  
 1715 Equipment from the Cavalry Equipment Board M1912 (1912, 1914, 1918R)  
 1716 IMUC 16-inch M1895, DCLF Model of 1912 (1917)  
 1717 Equipment Infantry M1910 (1912, 1914, 1917R)  
 1718 Equipment Infantry M1910 Description (1912, 1914, 1917R)  
 1719 Equipment, Horse & Officers & Enlisted Men (1905, 1908, 1917R)  
 1720 Explosives Regulations for Transportation (1914)  
 1721 Instructions for Loading Projectiles with Explosive D  
 (1906, 1907, 1911, 1913, 1915, 1917)  
 1722 IMUC 12" M1895M1, BC Model of 1917 (1917)  
 1723 Handbook on High Explosives and Shell Loading (1918)  
 1724 Rules Covering Handling and Storage of Explosives and Ammo (1918)  
 1725 Methods of Analyzing Amatol and its Constituents (1919)  
 1727 Fuzes for Use . . . (1895, 1904, 1905, 1906, 1908, 1913, 1917, 1924R)  
 1738 Crusher Gages, Tools and Accessories for Determining Pressures in Cannon  
 (1902, 1903, 1908, 1912, 1915, 1917R, 1922)  
 1741 Grenades, Rifle and Hand (1911, 1918)  
 1741A Hand Grenades IDU(1917, 1918)  
 1742 Chemical Arms now in Use by the German Army (1917)  
 1743 Grenade V.B. rifle, mark 1 (1917)  
 1744 Stokes Trench Mortar mk 1 & Shell mk 1, 3-in (1917, 1918, 1921)  
 1745 Handbook of the 6" Trench Mortar Mark 1, (1919, 1921)  
 1749 IMUC 4.72-inch 40 cal. R-F Armstrong, BC Armstrong (1898, 1904, 1908, 1911,  
 1917R)  
 1750 IMUC 4.7-inch 45 cal. R-F Armstrong, BC Armstrong (1898, 1904, 1908, 1911,  
 1917R)  
 1751 IMUC 4.7-inch 50 cal. RF Armstrong BC, Armstrong  
 (1898, 1904, 1908, 1911, 1912R, 1917R)  
 1752 IMUC 6-inch R-F gun Armstrong, BC Armstrong (1903, 1908, 1917R,)  
 1753 IMUC 6-inch R-F Armstrong, BC Armstrong (1903)  
 1755 Gun Making in the United States by Birnie (1914)  
 1756 IMUC Driggs-Seabury 15-lb, R-F Guns & their M1898 Masking Parapet Mounts  
 (1904, 1907, 1911, 1914, 1916, 1919)  
 1757 Gun, Gatling M1895 & M1900 (1896, 1908)  
 1759 Gun, Machine Colt Automatic (1901, 1905, 1906, 1907, 1916, 1917R)  
 1760 Hotchiss 2 Pounder Mountain Gun Handbook (1903)  
 1761 2.95-inch Vickers-Maxim Mountain Gun Material & Pack Outfit (1904, 1912,  
 1916)  
 1762 1-pdr. Maxim Q.F. Gun on Field Carriage (1903)  
 1763 IMUC 2.24-in (6 pounder) R-F and their Parapet Mounts (1903, 1908, 1915,1916)  
 1765 Desc, Instr 5 & 6 -inch R-F Guns (1903, 19007, 1911, 1916, 1917R)  
 1766 IMUC 15 lb. R-F, BC Model of 1902 (1905, 1908, 1913, 1916, 1917R)  
 1768 3-inch Wrought Iron Saluting Gun and Mount (1905, 1907)  
 1769 Gatling Gun M1895, M1900 & M1903 (1905, 1906, 1910, 1917R)  
 1770 Maxim Machine Gun 0.30 caliber M1904 Wheeled Mount M1905

- (1906, 1908, 1913, 1915, 1916, 1917R)
- 1771 Handbook of Gun Material 4.7-in M1906 (1910, 1914, 1917)
- 1772 Desc. 3-inch gun M1903, Ped Mount M1903 & Breech (1912, 1914)
- 1773 Handbook 3.8-inch gun (1917)
- 1774 IMUC 1.457-inch subcaliber guns (1917)
- 1775 Vickers Machine Gun M1915 with pack outfits & accessories (1917)
- 1776 Descrip Subcaliber Rifle and Target Device for DCs (1917)
- 1778 High Explosives for Bursting Charges of Projectiles, Methods (1911)
- 1779 Handbook of 6-inch Howitzer Material (1913, 1917)
- 1780 Handbook of 4.7-inch Howitzer Material M1908 (1913, 1916, 1917)
- 1781 Handbook of 3.8-inch Howitzer Material M1915 (1916, 1917R)
- 1782 Handbook of 4.7-inch Howitzer Material M1913 on pedestal mount M1915 (1916, 1918)
- 1783 IMUC 4.7-inch Howitzer Railway Mount M1917 (1917)
- 1784 Handbook of Motorized 4.7-inch Gun Material (1918)
- 1792 Inspectors Manual for Inspection of Powder & Explosives (1918)
- 1793 Manuals for Inspectors of Ordnance (1886, 1904, 1906, 1909, 1917)
- 1793 Supplement: Hydropneumatic Recoil Mechanisms, Inspec. Man. (1919)
- 1794 Description of the Wind Component Indicator (1904, 1906, 1908, 1917R)
- 1795 IMUC Instruments for Fire Control Systems for Coast and Field Artillery (1906, 1909, 1912, 1916, 1917R, 1918R)
- 1796 Handbook of Fire Control Equipment for Field Artillery (1916, 1917)
- 1797 Handbook of Range-Finders 70 cm & 80 cm (1915)
- 1798 Handbook for the 8-inch Howitzer Material M1917 (Vicars Mk VI) (1918)
- 1798 Rocking Bar Sights for 8-inch Howitzer carr. M1917 (Vicars) (1922)
- 1800 Methods for Testing in Toluol Plant Operations (1918)
- 1803 Instructions for Using and Repairing Dudgeon's Hydraulic Jacks (1902, 1904, 1907, 1909R, 1917)
- 1805 French Detonating Fuze M1899 (1917)
- 1806 Explosive Projectiles Fired with a Reduced Charge from 75 mm (1917)
- 1807 French Fuze Percussion Detonating 24/31 type 1 (1917)
- 1808 IMUC 3-inch gun, M1917 Antiaircraft Mount (1917, 1919, 1926)
- 1812 Machines, Tools, Supplies for Ordnance Repair Shops List (1905, 1907, 1908, 1909, 1911, 1912, 1916, 1918R)
- 1814 Descr. & Inst. for Care & Oper. Firing Magnetos Types GA & MA (1917)
- 1815 Handbook for British 75 mm Gun Material M1917 (1918)
- 1816 IMUC 8" Gun RY Mount M1918 (1918)
- 1817 75 mm Gun M1897 MI (French) (1918)
- 1818 155-mm Gun M1918 (Filloux) (1918)
- 1819 75 mm Gun M1916 (1916)
- 1820 Description of 12-inch Mortar and Instructions for its Care (1900, 1904, 1907, 1913, 1917, 1919R)
- 1849 List of Parts for 75 mm Gun Material (1917)
- 1850 Notes on the French 75 mm Gun Material (1917)
- 1851 DICO Schneider 155 mm Howitzer M1915 (1917)
- 1861 Handbook of Ordnance Data (1918, 1919R)
- 1862 The Story of the 75 (mm Field Gun) by W.N. Dickerson (1920)
- 1863 History of 155 mm Artillery Projects (1920)
- 1864 Ordnance Schools During the Period of War (1919)
- 1865 History of Rifles, Revolvers, and Pistols (1920)
- 1866 Automatic Pistol M1911 .45 cal. (1912, 1914, 1917R)
- 1868A Paints and Markings for Field Artillery Ammunition (1898, 1902, 1903, 1904, 1914, 1917)
- 1868B Paints for Seacoast Projectiles (1918)
- 1869 Oils, Paints, and Materials for Cleaning and Maintaining Seacoast Guns, Carriages, Sights and Position Finding Instruments (1898, 1908, 1909, 1917)
- 1870 Smokeless Powder for Small Arms and Cannons (1910, 1913, 1917)
- 1872 Seacoast Artillery Ammunition and Instr. Prep., Care & Use (1905, 1906, 1907, 1912, 1915, 1917)

1873 Lewis Depression Position Finders M1898 Type A & B (1902, 1909, 1913, 1918R)  
 1874 Rafferty Depression Position Finder, Type B (1907)  
 1874 History of 4.7 in Artillery by Anna Dee (1919)  
 1875 Swasey Depression Position Finder Types A, AI, AII  
 (1904, 1905, 1908, 1911, 1913, 1915, 1917R)  
 1876 Lewis Depression Position Finders M907 (1909, 1915, 1917, 1918)  
 1877 Distinctive Colors for Projectiles (Chart) (1904)  
 1879 List of Ordnance and Ordnance Stores (1908, 1910, 1914, 1916, 1917, 1918)  
 1880 IMUC Drill Primer Outfit (1907)  
 1881 Primers for Use in Service Cannon (1904, 1906, 1908, 1915, 1917)  
 1886 Price list of Ordnance Stores . . . Miscellaneous (1906)  
 1887 Price List of Articles of Submarine Mine Equipment (1906, 1917)  
 1888 Smokeless Powder and Other Explosives ... Regulations for Care & Test  
 (1902, 1907, 1912, 1914, 1917)  
 1889 Price List of 3-inch Gun Material (1907, 1910, 1912, 1914, 1917)  
 1890 Price List of Machine Gun and Automatic Gun Equipment .... (1907, 1917, 1919R)  
 1891 Price List of 2.95-inch Mountain gun V.M. (1916)  
 1892 Price List of Ammunition and its Components (1909, 1914, 1917)  
 1893 Price List of Subcalibur Guns, ... Cartridges ... Pertaining to Seacoast Artillery  
 (1909, 1915, 1917)  
 1894 Price list of 8, 10, 12, and 14 -inch Guns and Carriages, etc. (1909, 1914, 1917)  
 1895 Price List of 12 inch Mortars, etc. (1909, 1917)  
 1896 Price List of Seacoast Guns and Carriages 2.24 to 6-inch Incl. (1909, 1914, 1918)  
 1897 Price List of Seacoast Targets .... (1909, 1914, 1917)  
 1898 Price List of Fire Control Instruments .... (1910, 1917)  
 1899 Price List of United States .30 Caliber Rifle M1917... (1918)  
 1900 Price List of 4.7-inch Material M1906 (1915, 1917)  
 1902 Price List of 4.7-inch Howitzer Material (1915, 1917)  
 1903 Price List of 6-inch Howitzer Material (1916, 1917)  
 1904 Price List of Mobile Artillery Targets .....(1915, 1917)  
 1905 Barr & Stroud 9 ft. Horiz Base Self Cont. Range Finder (1911, 1917R)  
 1906 Price List of . . . Dummy Guns and Mortars ..... (1915, 1917)  
 1907 Description, etc. Berdan Range Finder (1903)  
 1908 Descrip & IU Weldon Range Finder (1902, 1906, 1909, 1911, 1917R)  
 1909 Descrip, Bausch & Lomb 22 ft Self-Contained Base Range Finder (1918, 1926)  
 1912 Ordnance Property Regulations (1917, 1918)  
 1917 Descrip. US .30 cal Rifle M1917 (1917, 1918)  
 1918 Colt Double Action .45 cal. M1917 Revolver (1917)  
 1919 Colt Double Action .38 cal Revolver (1905, 19008, 1912R)  
 1920 .30 cal. M1898 Rifle (1898, 1917, 1918)  
 1921 Rifle and Carbine Springfield Caliber .45 (1898)  
 1923 M1903 .30 cal. Rifle (1904, 1906, 1908, 1909, 1911, 1914, 1917, 1918)  
 1924 M1898 US Magazine Rifle .22 cal. (1906)  
 1925 M1903 .22 cal. Practice Rifle (1907, 1908, 1913, 1916, 1917R)  
 1926 M1909 .30 cal. Automatic Machine Gun (1912, 1915, 1916, 1917)  
 1926A M1909 .30 cal. Automatic Machine Gun Supplement (1913)  
 1927 M1909 .45 cal Colt Double Action Revolver (1909, 1913, 1917R)  
 1928 M1909 Benet-Mercie Machine Rifle (1917)  
 1930 M1915 Chauchat Automatic Machine Rifle (1917, 1918)  
 1931 M1917 .30 cal. Lewis Machine Gun (1917)  
 1932 M1914 Hotchkiss Machine Gun (1918)  
 1933 M1917 Marlin Aircraft Machine Gun (1918)  
 1934 Browning Machine Rifle, Air Cooled (1918)  
 1935 Instruction on the 37 mm Rapid Fire Gun (1918, 1922)  
 1936 75 mm Field Gun M1916 on AA Truck Mount M1917 (1918)  
 1937 Handbook on the Browning Machine Gun M1917 (1918)  
 1939 History of Artillery Projectiles (1921)  
 1940 History of Small Arms Ammunition (1920)  
 1941 History of Antiaircraft Guns (1920)

1942 History of Explosives (1919)  
 1943 War Activities of the Industrial Service Section, Ordnance Dept. (1920)  
 1946 Descript. Prediction Scale & Set-Forward Ruler (1907, 1909, 1917R)  
 1947 Battle Sight (1917)  
 1948 Descript. 3-inch Telescopic Sights M1917 (1918)  
 1952 Handbook of Sights for Cannons (1899, 1903)  
 1952 Sights for Field and Seacoast Artillery not covered in other .... (1903, 1913, 1917R)  
 1955 3-inch Telescopic Sights M1904 (1905, 1906, 1907, 1908R, 1912, 1917R)  
 1956 Descript. 2-inch Telescopic Sights M1906 (1907, 1910, 1913, 1914, 1917)  
 1957 Telescopic Musket Sights M1908 & M1913 (1908, 1912, 191915, 1917R)  
 1958 2-inch Telescopic Sights M1909 (1914, 1917R)  
 1959 3-inch Telescopic Sights M1912 (1914, 1917R)  
 1960 3-inch Telescopic Sights M1910 (1915, 1917R)  
 1961 Microscopic Examination of Steel (1915, 1917R)  
 1962 Artillery Repair Truck Body M1918 (1918)  
 1963 Equipment Repair Truck Body M1918 (1918)  
 1964 Staff Observation Car . . . M1918 (1918)  
 1965 Small Arms and Ordnance Equipment (1915, 1918)  
 1966 Directions for the Care and Repair of Leather Equipment (1911)  
 1970 Ordnance Department Supply and Allowance Tables (1917)  
 1971 Gun Material Table (1917)  
 1972 Reconnaissance Car Mk II . . . M1918 (1918)  
 1973 Machine Gun Car Mk II . . . M1918 (1918)  
 1974 3-inch Field Gun Trailer M1918 (1918)  
 1975 4-ton Shop Trailer . . . M1918 (1918)  
 1976 Machine Gun Car, Mk III . . . M1918 (1918)  
 1977 35-ton Tank Mk 8 (1918)  
 1979 Artillery Wheeled Tractor M1918 (1918)  
 1980 AA Machine Gun Trailer M1918 ... (1918, 1920)  
 1981 Heavy Ordnance Mobile Repair Shop (1919)  
 1982 Bench Reloading Tools, Instr. . . . for Small Arms Cartridges (1901)  
 1984 List of Hand Reloading Tools for Gallery Practice Ammunition (n.d.)  
 1985 12-inch Gun M1918 on Sliding RY Mount M1918 (1918)  
 1986 IMUC&D 1 Pdr, 75 mm Subcaliber Guns in Bore . . . (1906, 1910, 1914)  
 1986 IMUC 1 pdr & 75 mm Subcaliber Guns in Bore . . . (1906, 1907, 1910, 1914, 1917R)  
 1987 IMUC&D 75 mm Subcaliber Tubes in 12-inch Mortar Carriage (1904)  
 1987 IMUC 12-inch Mortar Carriage M1918 (1919)  
 1988 Hand Tools for Reloading Gallery Practice Cartridges M1903 Rifle (1905)  
 1989 Tools for Engineer Power Plant repairs, List (1914)  
 1990 Decapping & Cleaning Tools for Small Arms Cartridges (1907, 1909, 1912, 1917R)  
 1991 Coast Artillery Targets and Accessories (1908, 1909, 1913, 1917)  
 1992 Small Arms Targets and Equipment of Target Ranges (1910, 1914, 1918)  
 1993 Bench Reloading Tools for Ball Cartridges M1898 & M1905 (1908)  
 1994 Mobile Artillery Targets and Accessories (1909, 1910, 1914, 1917, 1918R)  
 1995 6-ton Special Tractor M1917 (1918)  
 1996 5-ton Artillery Tractor M1917 (1918)  
 1997 3-ton Truck Chassis MB-1917 (1918)  
 1998 Target Range Pocketbook for Use with M1903 .30 cal. US Rifle (1908, 1917R)  
 1999 2-ton Truck Chassis Nash Models 4017-A, -F, -L, (1918)  
 2000 Observation (Seacoast) Telescope M1908 (1911, 1917)  
 2001 IMUC 14-inch gun M1909, Turret Mount M1909 (1917)  
 2002 Ammunition Truck Body M1918 ... (1918)  
 2003 10-ton Artillery Tractor M1917 (1918, 1919)  
 2004 Artillery Supply Truck Body M1918 (1918)  
 2006 20-ton Artillery Tractor M120 HP Holt (1918)  
 2007 Light Repair Truck Comprising . . . M1918 (1918)  
 2008 3-inch AA Mobile Gun Mount M1918 (1918)  
 2009 Artillery Tractor 2 1/2 ton M1918 (1918)

2011 10-ton Trailer M1918 (1918)  
 2012 1-ton Truck Chassis M1918 (1918)  
 2015 Handbook of Spade and Firing Platform for 5" Gun Carr. M1917, 6" M1917A & B (1919)  
 2016 240 mm Howitzer Material M1918 (Schneider) (1918)  
 2017 155 mm Howitzer Material M1918 (Schneider) Motorized (1918)  
 2019 Ammunition for 3-inch AA guns M1917 & M1918 (1919)  
 2020 IMUC 12-inch RY Mount M1918 (1919)  
 2021 12-inch guns M1895 & M1895MI Breech & Firing Mech. for 12-in RY Carr. M1918 (1919)  
 2023 Railway Gun Car M1918 (1919)  
 2024 Railway Cars M1918MI & MII (1919)  
 2025 Narrow-gauge equipment for 12-in RY mortar mount M1918 (1919)  
 2026 Handbook of Ammunition Car for RY Batteries (1919)  
 2028 IMUC 12-inch RY Mount M1918  
 2030 History of District Offices (1920)  
 2032 History of Trench Warfare Material (1920)  
 2033 Field Artillery Material AA (1920)  
 2034 RY guns, etc., Vol. 1 & II (1922)  
 2036 Service Markings of Ammunition and Ammo Containers (1921, 1926)  
 2038 Field Service, General Duties & Functions (1921)  
 2042 American Seacoast Material, June 1922  
 2043 Elements of Mobile Carriage Design (1922)  
 2044 Descrip & IU Aberdeen Chronograph (1921)  
 2045 Design Manual Note No. 3, Artillery (Heat Treatment of Castings)(1923)  
 2046 Elements of Mobile Carriage Design (Supplement) (1923)  
 2048 Design of Steel Castings (1923)  
 2049 St. Chamond Recoil Mechanism for 75 mm Gun Carriage M1916MI (1924)  
 2050 Selection of Material for Guns (1940)  
 xxxx Ammunition for Heavy Artillery (Coast Artillery Board) (n.d.)

***Journal of the United States Artillery (1892-1922) & Coast Artillery Journal (1922-1948).***

These publications were the professional journals for the artillery and coast artillery. They have a wide variety of news, history, and technical articles on US Coast Artillery. Complete sets are hard to find, but some of the larger libraries have some copies. Issues often turn up at used book sales. The CAJ was originally published by the Coast Artillery School at Fort Monroe, Virginia, and later by the United States Coast Artillery Association. The Journal also published a series of 12 *Gunner's Instruction Pamphlets*, which covered all aspects of antiaircraft, fixed and mobile artillery and submarine mining. In 1948 the Journal was renamed the *Antiaircraft Journal*, which was last published in 1954.

**Books, Texts, etc.**

*Coast Artillery School Publications*, Fort Monroe, VA. Here are a few titles I have seen: Coast Artillery Training Bulletins (CATBs). These often went on to become Field Manuals; Army Extension Courses; Coast Artillery Weapons and Material Special Text No. 25, (1933 Edition); Fire Control and Position Finding for Seacoast Artillery (various dates).

*Occasional Papers*, Engineer School, U.S. Army, G.P.O., Washington D.C. A series of publications by the Engineer School. Most notable in this series related to harbor defense is: *Notes on Seacoast Fortification Construction* by Col. Eben E. Winslow (Occasional Papers No. 61, Engineer School, U.S. Army, G.P.O., 1920). This was one of the first comprehensive publications published on building modern seacoast artillery fortifications. The book had a number of drawings of different coast artillery emplacements. This book was reprinted by the CDSG Press in 1992.

*Engineer Mimeograph Series*. Another useful series, but unfortunately, very rare. Copies were printed and distributed to various offices, but few were preserved. The collections of these in the Archives have been separated from their drawings and figures.

*The Service of Coast Artillery*, by Frank T. Hines and Franklin W. Ward (Goodenough & Woglom Co., New York, 1910) is also an excellent period introductory reference on American Coast Artillery. The CDSG Press reprinted this book in 1997

*Ordnance and Gunnery*, by Ormond M. Lissak, John Wiley & Sons, NY, 1908 & 1915

*Ordnance and Gunnery*, by Lawrence L. Bruff, John Wiley & Sons, NY, 1896 & 1902.

*Ordnance and Gunnery*, by William H. Tschappat, John Wiley & Sons, NY,

*Ordnance and Gunnery*, by Earl McFarland, John Wiley & Sons, NY, 1929 & 1932.

*Elements of Ordnance*, by Thomas J. Hayes, John Wiley & Sons, NY 1938.

These books were used as text books in the US Military Academy.

*Historical Register and Dictionary of the United States Army from its Organization September 29, 1789 to March 2, 1903*, by Francis B. Heitman. This has been reprinted several times recently.

Military Service Publishing Company, Harrisburg, Pennsylvania. This company printed a number of texts used by ROTC program and Army Extension Courses. They can be found at used book stores. Examples include: *The R.O.T.C. Manual, Coast Artillery, Basic & Advanced, The Coast Artillery Corps: a Complete Manual of Technique and Material*, and *Seacoast Artillery, Basic Tactics and Techniques*.

### **Supplements and Annexes to Harbor Defense Projects**

In the National Archives Record Group 407, Records of the Adjutant General's Office, 1917-, Entry 366, are filed the annexes to the various Harbor Defense Projects of the 1920s to 1940s. A Harbor Defense Project was a written document which described all existing and projected harbor defense elements, including structures. Supplements to Harbor Defense Projects were published to update these projects and contain the annexes, or the annexes were published as a separate document themselves. A number of annexes (and supplements) were issued in 1932, 1936 and during the years 1944-1946. The annexes produced during the years 1944-1948 detail the progress on the construction of the new 1940s modernization program defenses with descriptions and a set of maps that showed where these new structures were located, the field of fire of the guns, radar coverage, etc. These annexes contain a wealth of information. They provide extensive detailed information on all tactical and physical aspects of the harbor defenses on the date of the annex, both existing and proposed, and a number of exhibits detailing the locations of elements.

They follow a format consisting of the following items, though this varies a bit with both location and date.

*Annex A*- Armament.

*Annex B*- Fire Control.

*Annex C*- Seacoast Searchlights.

*Annex D*- Underwater Defense.

*Annex E*- Anti-Aircraft Artillery (Harbor Defense).

*Annex F*- Gas Defense.

*Annex G*- Equipment.

*Annex H*- Real Estate Required.

These annexes contain specific information on each of the items cited above and contain a number of detailed maps and drawings. Exhibits included fields of fire for the major batteries, tactical organization charts, ammunition allowances, location maps, site maps, cable routings, and various appendices. An excellent place to find very specific information on a given harbor defense during the World War II years.

### **A Brief History of Reports of Completed Batteries and Reports of Completed Works**

by Matthew L. Adams (Originally published in the *CDSG Journal*/Volume 12, Issue 2 (May 1998) pp. 64-68)

Reports of completed batteries (RCBs) and reports of completed works (RCWs) were forms used by the Corps of Engineers to document seacoast fortifications and other buildings related to coast defense. RCBs were in use from 1900 until 1919. RCWs were in use from 1919 until the coast artillery was disbanded in 1950. A time line of the development of RCBs and RCWs is presented at the end of this report.

The antecedent of the RCB was the armament report and sketches described in Sections V and VI, Circular No. 2, Office of the Chief of Engineers (OCE), 1896.(1) The armament report summarized the guns and carriages received at the post and whether the armament was mounted or unmounted. The armament sketches contained a general drawing of the work (of each tier in multi-tiered forts) with each emplacement

marked and numbered properly. The sketches also indicated the type of platform, its construction, whether the platform was serviceable or not, and whether the gun was mounted or not. If the gun was mounted, the type of gun and whether it was serviceable or not was also noted. Some of these details can be traced back to Army Regulations in force in 1863.

Circular No. 2, 1896, was issued in response to the increased clerical load in the Office of the Chief of Engineers from the increased fortification construction activity. In excess of 30 batteries were either completed or under construction and many more were planned at the time this circular was issued (the first would not be transferred to the artillery until a few months after this circular was issued in March).

When the Spanish-American War started in 1898, fortification construction increased markedly over 1896 levels as Congress appropriated substantial sums for defense. By October 1900, over 125 batteries had been transferred to the artillery. Trying to distill the operational readiness of each harbor defense from the monthly operations reports, armament reports, and armament sketches described in Circular No. 2, OCE, 1896 (which included statements of financial accounts), must have become increasingly difficult for the staff at the Office of the Chief of Engineers. To make the task of assessing operational readiness easier the RCB was designed. The RCB form was printed in Circular No. 30, OCE, October 12, 1900.

The major strength of the RCB over earlier forms was its tabular format; a concise summary of the operational readiness of the harbor defenses in any engineer district. In filling out this form, works transferred prior to 1890 (i.e. prior to the completion of any Endicott batteries) only required the first two columns to be completed. The RCB was also to be used for reporting completed range-finding stations, cable tanks, mine casemates, and torpedo storehouses. For each engineer district, the RCB was to be current to October 1, 1900, and it was intended that new works would be added at the bottom of the list as they were transferred to the artillery. Importantly, this was a monthly report.

By order of Circular No. 18, OCE, September 22, 1903, annual armament reports were discontinued. In its place an expanded form of RCB was introduced. In addition to adding the official name of each battery to the RCB, the individual number and name of the manufacturer of each gun or mortar and carriage was to be recorded with the number of the emplacement each gun or mortar and carriage was mounted in (see Army Regulations of 1901, Paragraph 407, as amended by G.O. No. 82, Hq of the Army, AGO, 1902). A number of other minor items were to be recorded as well.

In contrast to its predecessors, these RCBs were to be submitted annually rather than monthly. The shift in frequency was undoubtedly intended to reduce unnecessary paperwork. By the time Circular No. 18, OCE, 1903, was issued, approximately 250 batteries had been transferred to the artillery. Only minor changes were made to the RCB from 1903 until RCWs were created in 1919.

Reports of completed works (RCWs) were created by a circular letter issued by the chief of engineers, Eben E. Winslow, on January 30, 1919.(2) It prescribed that the annual RCBs were no longer required and that all data that the RCBs were intended to provide would be submitted on seven forms referred to as reports of completed works. Furthermore, new forms need only be submitted whenever changes in works made the old forms obsolete, compared to the annual submission of RCBs.

A brief description of the content of each of those seven forms, which changed remarkably little over the next 30 years, follows:

Form	1	all important data relating to an individual battery
Form	2	details of fire control and torpedo structures
Form	3	details of mine wharfs and tramways
Form	4	details of searchlights (a separate sheet for each light)
Form	5	details of electric plants
Form	6	existing Engineer Department structures of permanent or semi-permanent nature
Form	7	a blueprint of the battery

Four copies of each RCW were supposed to be made; one for each of the following engineer offices: district, military department, divisional, and Office of the Chief of Engineers.(3)

The main difference in the RCW compared to the RCB was the separation of data onto different forms. For example, the details of different electric plants in a harbor defense may have been listed under fort subheadings in an RCB, which could have been scattered over several pages of a 20+ page RCB from a larger harbor defense. The RCW, on the other hand, consolidated all electrical plants onto a series of Form 5s. This allowed for easier comparison and assessment of material present at each harbor defense.

Reports of completed batteries (RCBs) and reports of completed works (RCWs) were the end products of an increasing clerical load on the staff at the Office of the Chief of Engineers. In comparison to armament reports and sketches of the 1890s, the RCBs of the early 1900s allowed the staff to distill much more easily the operational readiness of fortifications at each harbor defense across the country by listing individual batteries

and armament in a table. The RCWs extended this idea by subdividing the information recorded in RCBs into categories (general battery and armament information, fire control structures, searchlights, etc.). RCWs also allowed for greater detail in documenting different elements of coast defenses than the RCB. Both are essential documents in the study of modern U.S. coast defenses, 1890-1950.

### RCW Appendix

The following provides a brief guide to the location in the National Archives and Records Administration (NARA). At the time of this writing, RCBs and RCWs are housed at NARA-I in downtown Washington, D.C. The following is a list of correspondence file numbers for RCBs (1903-1919) for various harbor defenses in the continental United States, in geographic order: RG 77, Office of the Chief of Engineers, General Correspondence, 1894-1923, Document File, Entry 103:

<u>Harbor Defense</u>	<u>File No.</u>
Kennebec R./Portland, ME/Portsmouth	48917
Boston	49447
New Bedford/Narragansett Bay	48906
Eastern Long Island Sound	48813
New York (Eastern and Southern)	49105/79501
Delaware R.	49192
Baltimore	48833
Washington, D.C.	49187
Hampton Roads	48916
Wilmington, N.C.	48853
Charleston/Port Royal Sound	48927
Savannah	48827
Key West/Tampa Bay	49231
Pensacola	48855
Mobile	48905
New Orleans	48944
Galveston	66628
San Diego/Los Angeles	48904
San Francisco	49068
Columbia R.	49002
Puget Sound	48920
Guantanamo Bay, Cuba	66283
Honolulu	79705
Manila/Subic Bay	66629
Panama Canal	?????

RCWs can be found in RG 77, Office of the Chief of Engineers, Geographic File, 1918-1945, Classified Files, Entry 1011. Look under file no. 600.914 (the number is derived from the War Department decimal system in general use after 1918) under the harbor defense in which you are interested. Please note that the RCWs for Portland are not located with these records, and have not been located as yet.

### RCW Endnotes

1. Circular No. 2, 1896, also describes the form of the monthly report of operations, which were summarized and published at the end of each fiscal year in the Annual Report of the Chief of Engineers between 1896 and 1902.
2. See File No. 660, Box 1, Harbor Defense Geographic Files, 1918-1945, Unclassified Correspondence, Entry 1008, RG 77, Records of the Office of Chief of Engineers.
3. The RCWs located in the Office of the Chief of Engineers are the ones researchers most commonly access.
4. The tangible evidence of the preceding Regulations and this General Order can be found on drawings held in the Cartographics Branch of the National Archives in Record Group 77 (Records of the Office of the Chief of Engineers). A number of armament sketches dated post Civil War can be identified for various posts around the country where the emplacements are numbered right to left, as well as the condition of the emplacement.
5. Refer to Paragraph 407 of the Army Regulations of 1901, as well as G.O. No. 82, Hq of the Army, AGO, 1902.

## Coast Artillery Corps Organization and Heraldry

Here are several documents pertaining to the general organization of the coast artillery of the United States Army during the years 1901-1940. For additional specific information on US Army organization, the designation of the various units organized during World War I, individual coast artillery units, and the fates of Coast Artillery regiments and battalions during and after WW II and after see:

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Also some unit records and other service record information may be obtained from: National Personnel Records Center (Military Personnel Records), 9700 Page Avenue, St. Louis, MO 63132-5100, Tel. 314-538-4201

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Training Regulations, TR 435-270, *Service of the Piece, 12-inch and 14-inch guns on Disappearing Carriages*, War Department, GPO, Washington, D.C., (1924).

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#### Internet Resource Sites

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Ed Thelen's Nike web site—<http://ed-thelen.org>

Donald Bender's Nike web site—<http://alpha.fdu.edu/~bender/nike.html>  
The Last Nike Missile Site, the official Site SF-88L web site—<http://www.nikemissile.org>  
The Stanley R. Mickleson Safeguard Complex web site—<http://www.srmisc.org>  
The FAS United States nuclear forces guide web sites has a number of documents  
on Cold War missile programs—<http://www.fas.org/nuke/guide/usa/>  
The Environmental Analysis Branch- ACC/CEVP site provides a number of historical studies  
in downloadable PDF format under Cultural Resources, Cold War Related Studies—  
<http://www.cevp.com>